## SEQUENCE LISTING

<11	0> R	eed,	John	n C.												
<12	O> N	ovel	Car	d Pr	otei	ns I	nvol	ved	in C	ell	Deat:	h Re	gula	tion		
<130	O> P	-LJ	3650													
<14	0 <0	9/38	8,22	1												
<14	1> 1	999-	09-0	1												
<16	0> 1	8														
<170	)> Pa	ateni	tIn V	Ver.	2.1											٠
<210	)> 1															
<21	1> 4	422														
<212	2> DI	NA														
<213	3> H	omo:	sapie	ens												
<220	)>															
<22	l> CI	DS														
<222	2> (	1)	(4422	2)												
<400	)> 1															
atg	gct	ggc	gga	gcc	tgg	ggc	cgc	ctg	gcc	tgt	tac	ttg	gag	ttc	ctg	48
Met	Ala	Gly	Gly	Ala	Trp	Gly	Arg	Leu	Ala	Cys	Tyr	Leu	Glu	Phe	Leu	
1				5					10					15		
aag	aag	gag	gag	ctg	aag	gag	ttc	cag	ctt	ctg	ctc	gcc	aat	aaa	gcg	96
Lys	Lys	Glu	Glu	Leu	Lys	Glu	Phe	Gln	Leu	Leu	Leu	Ala	Asn	Lys	Ala	
			20					25					30			
cac	tcc	agg	agc	tct	tcg	ggt	gag	aca	ccc	gct	cag	сса	gag	aag	acg	144
His	Ser	Arg	Ser	Ser	Ser	Gly		Thr	Pro	Ala	Gln		Glu	Lys	Thr	
		35					40					45				
agt	ggc	atg	gag	gtg	gcc	tcg	tac	ctg	gtg	gct	cag	tat	ggg	gag	cag	192
Ser	Gly	Met	Glu	Val	Ala	Ser	Tyr	Leu	Val	Ala	Gln	Tyr	Gly	Glu	Gln	
	50					55					60					
cgg	gcc	tgg	gac	cta	gcc	ctc	cat	acc	tgg	gag	cag	atg	ggg	ctg	agg	240
Arg	Ala	Trp	Asp	Leu	Ala	Leu	His	Thr	Trp	Glu	Gln	Met	Gly	Leu	Arg	
65					70					75					80	
tca	ctg	tgc	gcc	caa	gcc	cag	gaa	ggg	gca	ggc	cac	tct	ccc	tca	ttc	288
Ser	Leu	Cys	Ala	Gln	Ala	Gln	Glu	Gly	Ala	Gly	His	Ser	Pro	Ser	Phe	
				85					90					95		

		_		_	_		cac His	_				-				336
		_			_		tgg Trp 120			-	_	_		,,,	_	384
	_				-		gtt Val	_	-	-	_		-			432
		_		_	_		tct Ser	_						_		480
	_			-			tct Ser		-	_					_	528
				_		_	Gly	_						_		576
_		-		-		_	gag Glu 200	-							_	624
_	_	-					tac Tyr		-		_	_	_		_	672
							ccc Pro			_			-		_	720
		_				-	cta Leu	_								768
			-		-		tgt Cys									816
							cag Gln 280									864

	aga Arg 290	_		_											912
	gag Glu														960
	ctg Leu														1008
	att Ile		_												1056
_	ggc Gly	_	_			_	_								1104
-	aga Arg 370		-	_	-		_			-		_			1152
	aaa Lys														1200
	cca Pro			-					_		_	-			1248
	gtc Val	-	_		-	-				_	_		 -	_	1296
	cag Gln	_		_	_	_	_			_	-				1344
	ccc Pro 450		_			_		_	_				_		1392
	ctc Leu										-				1440

				agc Ser 485										1488
-			_	att Ile										1536
		_	_	tgt Cys										1584
				cag Gln										1632
				acc Thr	_					_	_	_		1680
_	_		_	gga Gly 565	_		_	_						1728
				caa Gln	-				_		_	-		1776
				gat Asp										1824
				cac His			_	-		_				1872
			_	ttc Phe	_	_								1920
				aaa Lys 645										1968
	_	_		gga Gly			_			-				2016

		_		_	tta Leu	-	_	_			-					2064
					ctg Leu											2112
_		_	_	_	ctg Leu 710	_	_				_					2160
_	_				cgg Arg			_		_				_	_	2208
					ggc Gly											2256
	-			-	att Ile			_	-			_	_		_	2304
_					cag Gln		-				-			_	_	2352
	_				gtc Val 790		_		_	_			_			2400
					gtc Val											2448
		_	_	-	cac His		_		_	_		-	_		-	2496
_	-		_	-	ctc Leu	_			_		_	_		_		2544
		_		_	tgc Cys	_	-		-			-	-	-		2592

cag acc cto	g acc gag cto	g gac ctg a	agc ttc aat	gtg ctc acg	gat gct 2640
Gln Thr Let 865	Thr Glu Lev 870		Ser Phe Asn 875	Val Leu Thr	Asp Ala 880
	-	_		ccg agc tgc	
Gly Ala Lys	: His Leu Cy: 885	s Gln Arg I	Leu Arg GIn 890	Pro Ser Cys	Lys Leu 895
				tct gac tgc	
GIN AIG DEC	900	_	905	Ser Asp Cys 910	Cys Gin
				ctg aag gag Leu Lys Glu	
915		920	Jei iio Jei	925	neu Asp
				cga ctg ctc Arg Leu Leu	
930	ASH ASH LEC	935	var dry var	940	Cyb Ciu
				ctg ggg ctg Leu Gly Leu	
945	950		955	ned ory ned	960
-				agg gcc ctg Arg Ala Leu	
	965		970		975
				aaa cca agt Lys Pro Ser	
014 270 010	980		985	990	
		_		agt aat agc Ser Asn Ser	
995	_	1000	_	1005	
				gcg gct tcc Ala Ala Ser	
1010	ing on my	1015	_	1020	
				aag atc ttc Lys Ile Phe	
1025	1030		1035	Lyo IIC IIIC	1040
	-			gta ccg gtg Val Pro Val	
014 116	1045		1050		055

_	_	Val				_	Ser			_	ctg Leu	His	_	_		3216
	Gly					Phe					ggg Gly		-	_		3264
Glu					Glu	-				Arg	gtt Val 1100				-	3312
-	Gly			Arg				_	Gly		tgc Cys			Met	-	3360
_			Thr	-			-	Phe	-		tgg Trp	-	Gln		-	3408
		Ile			_		Ser		-	-	gca Ala	Gly		_	_	3456
	Ile					Gly					gtg Val 1					3504
Phe					Gly					Thr	tcc Ser 180	_			_	3552
	His			Glu			_		Leu		aag Lys		_	Arg		3600
			His					Asn			ttc Phe		Pro			3648
-		Leu		-			Asn	_	_	-	ttc Phe	Ile		-		3696
	Val		_				-	_			gag Glu	-	-			3744

•		tcc att cgg aag gcc Ser Ile Arg Lys Ala 1260	
		cga atc cac aag cca Arg Ile His Lys Pro 1275	
Leu Thr Pro Leu !	Tyr Met Gly Cys Arg	tac act gtg tct ggg Tyr Thr Val Ser Gly 1290	
		gaa ctg gag ctc tgc Glu Leu Glu Leu Cys 1310	
		gag ttc tac gtt ggc Glu Phe Tyr Val Gly 1325	<del>-</del>
		gac aag aaa gat gag Asp Lys Lys Asp Glu 1340	<del>-</del>
		gat ctc atg cct gca Asp Leu Met Pro Ala 1355	
Leu Ile Pro Pro A	Ala Arg Ile Ala Val	cct tca cct ctg gat Pro Ser Pro Leu Asp 1370	
		cga gag cag ctg ata Arg Glu Gln Leu Ile 1390	
		aaa ctg cat gga cag Lys Leu His Gly Gln 1405	
		gct gag aac acg agg Ala Glu Asn Thr Arg 1420	
	Leu Phe Ser Leu Ser 1430	cag tcc tgg gac cgg Gln Ser Trp Asp Arg 1435	
	8		

aaa gat gga ctc tac caa gcc ctg aag gag acc cat cct cac ctc att 4368 Lys Asp Gly Leu Tyr Gln Ala Leu Lys Glu Thr His Pro His Leu Ile 1445 1450 atg gaa ctc tgg gag aag ggc agc aaa aag gga ctc ctg cca ctc agc 4416 Met Glu Leu Trp Glu Lys Gly Ser Lys Lys Gly Leu Leu Pro Leu Ser 1460 1465 1470 4422 agc tga Ser <210> 2 <211> 1473 <212> PRT <213> Homo sapiens <400> 2 Met Ala Gly Gly Ala Trp Gly Arg Leu Ala Cys Tyr Leu Glu Phe Leu 5 10 Lys Lys Glu Glu Leu Lys Glu Phe Gln Leu Leu Ala Asn Lys Ala 25 His Ser Arg Ser Ser Gly Glu Thr Pro Ala Gln Pro Glu Lys Thr 40 Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gln Tyr Gly Glu Gln 55 Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg 75 Ser Leu Cys Ala Gln Ala Gln Glu Gly Ala Gly His Ser Pro Ser Phe 85 90 Pro Tyr Ser Pro Ser Glu Pro His Leu Gly Ser Pro Ser Gln Pro Thr 100 105 Ser Thr Ala Val Leu Met Pro Trp Ile His Glu Leu Pro Ala Gly Cys 120 Thr Gln Gly Ser Glu Arg Arg Val Leu Arg Gln Leu Pro Asp Thr Ser 135 Gly Arg Arg Trp Arg Glu Ile Ser Ala Ser Leu Leu Tyr Gln Ala Leu 150 155 160 Pro Ser Ser Pro Asp His Glu Ser Pro Ser Gln Glu Ser Pro Asn Ala 165 170 Pro Thr Ser Thr Ala Val Leu Gly Ser Trp Gly Ser Pro Pro Gln Pro 180 185 190 Ser Leu Ala Pro Arg Glu Gln Glu Ala Pro Gly Thr Gln Trp Pro Leu Asp Glu Thr Ser Gly Ile Tyr Tyr Thr Glu Ile Arg Glu Arg Glu Arg 215

Glu Lys Ser Glu Lys Gly Arg Pro Pro Trp Ala Ala Val Val Gly Thr

225					230					235					240
Pro	Pro	Gln	Ala	His	Thr	Ser	Leu	Gln	Pro	His	His	His	Pro	Trp	Glu
				245					250					255	
Pro	Ser	Val	Arg	Glu	Ser	Leu	Cys	Ser	Thr	Trp	Pro	Trp		Asn	Glu
			260					265					270		
Asp	Phe		Gln	Lys	Phe	Thr		Leu	Leu	Leu	Leu		Arg	Pro	His
		275			_	_	280	_	_		_	285	_	_	
Pro	-	Ser	Gln	Asp	Pro		Val	Lys	Arg	Ser	_	Pro	Asp	Tyr	Val
<b>61</b>	290	70	7	<b>C1</b>		295	<b>71</b> -	<b>01</b>	<b>71</b> -	7	300	T	DI	C1	D
	GIU	Asn	Arg	GIÀ		Leu	ire	GIU	TTE	Arg 315	Asp	Leu	Pne	GTĀ	
305	LOU	Λcn	Thr	Gln	310	Dro	Λrα	Tlo	Wal		Lau	Gln	Gly	Δla	320
Сту	ьеu	Asp	1111	325	Giu	FLO	Arg	116	330	116	пец	GIII	СТУ	335	лια
Glv	Tie	Glv	Lys		Thr	Len	Ala	Ara		Val	Lvs	Glu	Ala		Glv
	110	O L y	340	001		Lou	1114	345	0211	, 41	2,0	014	350		011
Ara	Glv	Gln	Leu	Tvr	Glv	Asp	Arg		Gln	His	Val	Phe		Phe	Ser
,	_	355		_	-	•	360					365	-		
Cys	Arg	Glu	Leu	Ala	Gln	Ser	Lys	Val	Val	Ser	Leu	Ala	Glu	Leu	Ile
	370					375					380				
Gly	Lys	Asp	Gly	Thr	Ala	Thr	Pro	Ala	Pro	Ile	Arg	Gln	Ile	Leu	Ser
385					390					395					400
Arg	Pro	Glu	Arg	Leu	Leu	Phe	Ile	Leu	Asp	Gly	Val	Asp	Glu	Pro	Gly
				405					410					415	
Trp	Val	Leu	Gln	Glu	Pro	Ser	Ser		Leu	Cys	Leu	His		Ser	Gln
_		_	420	_		_	_	425		_	_		430		
Pro	GIn		Ala	Asp	Ala	Leu		GTŸ	Ser	Leu	Leu		Lys	Thr	lle
T 011	Dro	435	7\ 1 ->	502	Dho	T 011	440	Thr	70.10	Λκα	Thr	445	7/1-2	Lou	Cln
ьеи	450	GIU	Ala	ser	rne	455	TTE	1111	Ата	Arg	460	1111	Ата	пеп	GIII
Asn		Tle	Pro	Ser	Len		Gln	Δla	Ara	Tro		Glu	Va 1	Leu	Glv
465	пса	110	110	DCI	470	014	0111	7114	7112 9	475	· 41	014	741	1100	480
	Ser	Glu	Ser	Ser		Lys	Glu	Tyr	Phe		Arg	Tyr	Phe	Thr	
				485		•		-	490	_		-		495	•
Glu	Arg	Gln	Ala	Ile	Arg	Ala	Phe	Arg	Leu	Val	Lys	Ser	Asn	Lys	Glu
			500					505					510		
Leu	Trp	Ala	Leu	Cys	Leu	Val	Pro	Trp	Val	Ser	Trp	Leu	Ala	Cys	Thr
		515					520					525			
Cys	Leu	Met	Gln	Gln	Met	Lys	Arg	Lys	Glu	Lys	Leu	Thr	Leu	Thr	Ser
	530					535					540				
	Thr	Thr	Thr	Thr		Cys	Leu	His	Tyr		Ala	Gln	Ala	Leu	
545		_	_		550		_	_	_	555	_	_			560
Ala	GIn	Pro	Leu	_	Pro	Gln	Leu	Arg	_	Leu	Cys	Ser	Leu		Ala
C1	G1	т1 -	<b></b>	565	T	T	m1	T	570	0	D	7	70	575	70
GIU	σтλ	тте	Trp 580	GTU	гуз	ьys	IIIT	ьеи 585	rne	ser	rro	Asp	590	ьeu	Arg
Luc	Hie	Glv	Leu	Δen	Glv	Δla	Tlo		Ser	Thγ	Pho	T.e.i		Me+	Gl v
y -3	*****	595	Leu	1.50	O+ y	<u>.</u> . a	600	-TC	JC1	-111	r 11C	605	Lys		○ <b>-</b> y
Ile	Leu		Glu	His	Pro	Ile		Leu	Ser	Tvr	Ser		Ile	His	Leu
					-				_						

	610					615					620				
Cys 625	Phe	Gln	Glu	Phe	Phe 630	Ala	Ala	Met	Ser	Tyr 635	Val	Leu	Glu	Asp	Glu 640
Lys	Gly	Arg	Gly	Lys 645	His	Ser	Asn	Cys	Ile 650	Ile	Asp	Leu	Glu	Lys 655	Thr
Leu	Glu	Ala	Tyr 660	Gly	Ile	His	Gly	Leu 665	Phe	Gly	Ala	Ser	Thr 670	Thr	Arg
Phe	Leu	Leu 675	Gly	Leu	Leu	Ser	Asp 680	Glu	Gly	Glu	Arg	Glu 685	Met	Glu	Asn
Ile	Phe 690	His	Cys	Arg	Leu	Ser 695	Gln	Gly	Arg	Asn	Leu 700	Met	Gln	Trp	Val
Pro 705	Ser	Leu	Gln	Leu	Leu 710	Leu	Gln	Pro	His	Ser 715	Leu	Glu	Ser	Leu	His 720
Cys	Leu	Tyr	Glu	Thr 725	Arg	Asn	Ľys	Thr	Phe 730	Leu	Thr	Gİn	Val	Met 735	Ala
His	Phe	Glu	Glu 740	Met	Gly	Met	Cys	Val 745	Glu	Thr	Asp	Met	Glu 750	Leu	Leu
Val	Cys	Thr 755	Phe	Cys	Ile	Lys	Phe 760	Ser	Arg	His	Val	Lys 765	Lys	Leu	Gln
Leu	Ile 770	Glu	Gly	Arg	Gln	His 775	Arg	Ser	Thr	Trp	Ser 780	Pro	Thr	Met	Val
Val 785	Leu	Phe	Arg	Trp	Val 790	Pro	Val	Thr	Asp	Ala 795	Tyr	Trp	Gln	Ile	Leu 800
Phe	Ser	Val	Leu	Lys 805	Val	Thr	Arg	Asn	Leu 810	Lys	Glu	Leu	Asp	Leu 815	Ser
Gly	Asn	Ser	Leu 820	Ser	His	Ser	Ala	Val 825	Lys	Ser	Leu	Cys	Lys 830	Thr	Leu
Arg	Arg	Pro 835	Arg	Cys	Leu	Leu	Glu 840	Thr	Leu	Arg	Leu	Ala 845	Gly	Cys	Gly
Leu	Thr 850	Ala	Glu	Asp	Cys	Lys 855	Asp	Leu	Ala	Phe	Gly 860	Leu	Arg	Ala	Asn
Gln 865	Thr	Leu	Thr	Glu	Leu 870	Asp	Leu	Ser	Phe	Asn 875	Val	Leu	Thr	Asp	Ala 880
Gly	Ala	Lys	His	Leu 885	Cys	Gln	Arg	Leu	Arg 890	Gln	Pro	Ser	Cys	Lys 895	Leu
Gln	Arg	Leu	Gln 900	Leu	Val	Ser	Cys	Gly 905	Leu	Thr	Ser	Asp	Cys 910	Cys	Gln
Asp	Leu	Ala 915	Ser	Val	Leu	Ser	Ala 920	Ser	Pro	Ser	Leu	Lys 925	Glu	Leu	Asp
Leu	Gln 930	Gln	Asn	Asn	Leu	Asp 935	Asp	Val	Gly	Val	Arg 940	Leu	Leu	Cys	Glu
Gly 945	Leu	Arg	His	Pro	Ala 950	Cys	Lys	Leu	Ile	Arg 955	Leu	Gly	Leu	Asp	Gln 960
Thr	Thr	Leu	Ser	Asp 965	Glu	Met	Arg	Gln	Glu 970	Leu	Arg	Ala	Leu	Glu 975	Gln
Glu	Lys	Pro	Gln 980	Leu	Leu	Ile	Phe	Ser 985	Arg	Arg	Lys	Pro	Ser 990	Val	Met
Thr	Pro	Thr	Glu	Gly	Leu	Asp	Thr	Gly	Glu	Met	Ser	Asn	Ser	Thr	Ser

		995					1000					1005			
		Lys	Arg	Gln	-	Leu	Gly	Ser	Glu			Ala	Ser	His	Va.
	1010					1015					1020				
		Ala	Asn		_	Leu	Leu	Asp				Ile	Phe		
1025					1030					1035					104
Ala	Glu	Ile	Ala	Glu	Glu	Ser	Ser	Pro	Glu	Val	Val	Pro	Val	Glu	Le
				1045					1050				;	1055	
Leu	Cys	Val	Pro	Ser	Pro	Ala	Ser	Gln	Gly	Asp	Leu	His	Thr	Lys	Pro
			1060					1065					1070		
Leu	Gly	Thr	Asp	Asp	Asp	Phe	Trp	Gly	Pro	Thr	Gly	Pro	Val	Ala	Th
		1075					1080					1085			
Glu	Val	Val	Asp	Lvs	Glu	Lys	Asn	Leu	Tyr	Arq	Val	His	Phe	Pro	Va.
	1090		•	_		1095			-		1100				
		Ser	Tvr	Ara		Pro	Asn	· Thr	Glv			Phe	٧al	Met	Arc
1105		001	<b>-</b> y -		1110	110	11011			1115	O J O	1110			1120
		17 - 1	mb~			Ile	C1.,	Dho			Twn	7.00	Cln		
GIU	Ala	Val			GIU	116	Giu		-	val	пр	Asp			ье
~ 1	<b>6</b> 1	- ·		1125	<b>~</b> 1		_		1130			<b>61</b>		1135	-
GTA	GIU			Pro	GIn	His			Met	Val	Ата			Leu	ьeı
_			1140		_			1145					1150		
Asp	Ile	Lys	Ala	Glu	Pro	Gly		Val	Glu	Ala	Val	His	Leu	Pro	His
		1155					1160					1165			
Phe	Val	Ala	Leu	Gln	Gly	Gly	His	Val	Asp	Thr	Ser	Leu	Phe	Gln	Met
1	L170					1175				;	1180				
Ala	His	Phe	Lys	Glu	Glu	Gly	Met	Leu	Leu	Glu	Lys	Pro	Ala	Arg	Val
1185	5				1190				-	1195				:	1200
Glu	Leu	His	His	Ile	Val	Leu	Glu	Asn	Pro	Ser	Phe	Ser	Pro	Leu	Gly
				1205					1210					1215	
Val	Leu	Leu	Lys	Met	Ile	His	Asn	Ala	Leu	Arg	Phe	Ile	Pro	Val	Thi
			1220					1225					1230		
Ser	Val	Val	Leu	Leu	Tvr	His	Ara	Val	His	Pro	Glu	Glu	Val	Thr	Ph€
		1235			-		1240					1245			
His			Len	Tle	Pro	Ser	Asp	Cvs	Ser	Tle			Ala	Tle	Asr
	250	- 1 -				1255	110 P	0,0	001		1260	-10			1101
		G111	Mot	Tare		Gln	Dha	₩ 1	Ara			Luc	Pro	Pro	Dro
1265		GLU	1.16.0		1270	GIII	THE	Vai		L275	1113	пуз	110		1280
		D	т			<b>C1</b>	<b>Q</b>	70			** - 1	0	C1		
Leu	Thr	Pro			мет	Gly	Cys			Thr	vaı	ser			GT.
				1285					1290					1295	
Ser	Gly			Glu	Ile	Leu			Glu	Leu	Glu	Leu	Cys	Tyr	Arc
		-	1300				-	1305				-	1310		
Ser	Pro	Gly	Glu	Asp	Gln	Leu	Phe	Ser	Glu	Phe	Tyr	Val	Gly	His	Leu
	1	1315				1	1320				1	1325			
Gly	Ser	Gly	Ile	Arg	Leu	Gln	Val	Lys	Asp	Lys	Lys	Asp	Glu	Thr	Let
1	.330				-	1335				1	1340				
Val	Trp	Glu	Ala	Leu	Val	Lys	Pro	Gly	Asp	Leu	Met	Pro	Ala	Thr	Thr
1345					1350			-	_	355					1360
		Pro	Pro			Ile	Ala	Val			Pro	Leu	asA		
				1365	- 2				1370					.375	
Gln	Len	Leu			Val	Asp	G]n			G] 11	G] n	Leu			Arc

			1380					1385					1390			
Val	Thr	Ser	Val	Glu	Val	Val	Leu	Asp	Lys	Leu	His	Gly	Gln	Val	Leu	
		1395					1400					1405				
	Gln	Glu	Gln	Tyr		_	Val	Leu	Ala			Thr	Arg	Pro	Ser	
	1410	7)	T	T		1415	T	0	C1-		1420	7	70	T	<b>C</b>	
142	Met 5	Arg	гÀг		Pne 1430	Ser	Leu	Ser		ser 1435	Trp	Asp	Arg	_	Cys 1440	
	Asp	Glv	Len			Ala	Len	Lvs			His	Pro	His			
2,0	p	Cry		1445	O I I I	1114	Dea	_	1450	1111	1120	110		1455		
Met	Glu	Leu	Trp	Glu	Lys	Gly	Ser	Lys	Lys	Gly	Leu	Leu	Pro	Leu	Ser	
			1460					1465					1470			
Ser																
													•			
<b>~21</b>	0> 3															
	1>4	200														
	2> Di															
<21	3> H	omo s	sapie	ens												
<22	0>															
	1> CI															
<22.	2> (	1)	(419	7)												
<40	0> 3															
	gct	adc	gga	qcc	tgg	aac	cqc	cta	acc	tat	tac	tta	gag	ttc	cta	48
	Ala						_	_	_	_		_			_	
1				5					10					15		
-	aag		2 2	_	_			_		_		_			, ,	96
Lys	Lys	Glu		Leu	Lys	Glu	Phe		Leu	Leu	Leu	Ala		Lys	Ala	
			20					25					30			
cac	tcc	agg	aαc	tct	tca	aat	gag	aca	CCC	act	cad	cca	gag	aad	aca	144
	Ser				_					_	_			_	<del>-</del>	111
		35				_	40					45		_		
agt	ggc	atg	gag	gtg	gcc	tcg	tac	ctg	gtg	gct	cag	tat	ggg	gag	cag	192
Ser	Gly	Met	Glu	Val	Ala		Tyr	Leu	Val	Ala	Gln	Tyr	Gly	Glu	Gln	
	50					55					60					
	~~~	+		~+-		-+-	~~ L		<b>.</b>			_ 1		_4		240
	gcc		-		-						_	_		_	,,,	240
65	Ala	тЪ	usb	теп	70	ьeu	птр	TIIT	тър	75	GTII	met	ату	ьеи	Arg 80	
0,5					, 0					, ,			. ,		00	
													•			

Ser Leu Cys Ala Gln Ala Gln Glu Gly Ala Gly His Ser Pro Ser Phe

		_		-	-	ccc Pro		_				_			336
		-			_	ccc Pro				-	_	_		 -	384
	_				-	agg Arg 135	-	-	-	_	_		-		432
	_	_		_	_	atc Ile		-							480
						gag Glu									528
						ctg Leu									576
_		_		_		cag Gln		_							624
-	-	_				tac Tyr 215			-		-	-	-	 -	672
						agg Arg									720
		_				agc Ser		_						 	768
		-	_		-	ctc Leu	-								816
						aca Thr							_		864

	_	_		_		_					tgg Trp 300				912
			_							_	gac Asp				960
	_	_			_		_				ctg Leu				1008
			_			_	_				aag Lys				1056
											gtc Val				1104
•	_		_	_	_		_			-	ctc Leu 380	_			1152
		_			_		_	_			aga Arg				1200
				_					_		gta Val	_			1248
										_	ctg Leu				1296
											ctg Leu				1344
											acc Thr 460				1392
					_		_	_	_		gta Val		_		1440

											aga Arg					1488
_			_		_	_			_	_	aaa Lys					1536
											tgg Trp					1584
_	_	_	_	_	_	_		_	_		ctc Leu 540					1632
											gcc Ala					1680
-	_		_			_		-	_		tgc Cys		_	-	-	1728
						-				_	cca Pro	-	-			1776
_				-		-					ttc Phe	_	_	_		1824
											agc Ser 620					1872
						_	_	_			gtc Val	_		_		1920
											gat Asp	-	_	_	_	1968
		-						_			gca Ala				_	2016

		_		_	tta Leu	_	_				_		_			2064
			_		ctg Leu		_				_	_	_		_	2112
_		_	_	_	ctg Leu 710	_	_				_					2160
			_		cgg Arg			_		_				_	_	2208
		-	-	_	ggc Gly	_	-	_	_		-	_				2256
	_			_	att Ile			_	_		, ,	_	_		_	2304
_					cag Gln		-				-			-	-	2352
-	-				gtc Val 790		_		_	_			_			2400
		_		_	gtc Val		_		-	_		-	-		_	2448
		_	_	_	cac His		_		_	-		-	_		_	2496
					ctc Leu											2544
					tgc Cys	_	_		-			_	_	_		2592

_		-			_	gac Asp	_	_					-	-	-	2640
	-				-	cag Gln	-	_	_	_	-	_	-	-		2688
_	_	-	-	_	-	agc Ser	_			_		_	-	-	-	2736
						agt Ser						-			_	2784
						gat Asp 935									-	2832
					_	tgc Cys				_	_				-	2880
						ggc Gly						_	_		_	2928
				_		cag Gln	_							_		2976
			_	_		ctc Leu 1			_	_	Val	_	_			3024
Pro					Ala	gag Glu .015				Pro						3072
	Leu			Val		tct Ser			Ser					His		3120
			Gly			gat Asp		Phe					Gly			3168

Ala Thr Glu		: aaa gaa aag ) Lys Glu Lys 1065				3216
	Gly Ser Tyr	cgc tgg ccc Arg Trp Pro				3264
2 3 3	3 3 3 3	gtt gag att Val Glu Ile 1095	Glu Phe		_	3312
		cca cag cac Pro Gln His				3360
		gag cct gga Glu Pro Gly	-	Glu Ala Val		3408
Pro His Phe	3 3 3	caa ggg ggc Gln Gly Gly 1145		-	-	3456
= =	His Phe Lys	gag gag ggg Glu Glu Gly 1160	_			3504
33 3 3 3	-	ata gtt ctg Ile Val Leu 1175	Glu Asn	<del>-</del>		3552
	_	atg atc cat Met Ile His				3600
_		ctt tac cac Leu Tyr His		His Pro Glu		3648
Thr Phe His		atc cca agt Ile Pro Ser 1225				3696
	_	agc cct gga Ser Pro Gly 1240		-		3744

_				caa gtg aaa gac Gln Val Lys Asp	
-		u Val Trp Gl		aaa cca gga gat Lys Pro Gly Asp 1280	3840
-	-	-		ata gcc gta cct Ile Ala Val Pro 1295	3888
_	= =		eu His Phe Val	gac cag tat cga Asp Gln Tyr Arg 1310	3936
	Ile Ala Ar		er Val Glu Val	gtc ttg gac aaa Val Leu Asp Lys 1325	3984
2 23				agg gtg ctg gct Arg Val Leu Ala	4032
		r Gln Met Ar		agc ttg agc cag Ser Leu Ser Gln 1360	4080
				gcc ctg aag gag Ala Leu Lys Glu 1375	4128
Thr His Pro			u Trp Glu Lys	ggc agc aaa aag Gly Ser Lys Lys 1390	4176
gga ctc ctg Gly Leu Leu 1395	Pro Leu Se				4200
<210> 4					

<210> 4

<211> 1399

<212> PRT

<213> Homo sapiens

<400> 4

Met Ala Gly Gly Ala Trp Gly Arg Leu Ala Cys Tyr Leu Glu Phe Leu Lys Lys Glu Glu Leu Lys Glu Phe Gln Leu Leu Ala Asn Lys Ala His Ser Arg Ser Ser Gly Glu Thr Pro Ala Gln Pro Glu Lys Thr Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gln Tyr Gly Glu Gln Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg Ser Leu Cys Ala Gln Ala Gln Glu Gly Ala Gly His Ser Pro Ser Phe Pro Tyr Ser Pro Ser Glu Pro His Leu Gly Ser Pro Ser Gln Pro Thr Ser Thr Ala Val Leu Met Pro Trp Ile His Glu Leu Pro Ala Gly Cys Thr Gln Gly Ser Glu Arg Arg Val Leu Arg Gln Leu Pro Asp Thr Ser Gly Arg Arg Trp Arg Glu Ile Ser Ala Ser Leu Leu Tyr Gln Ala Leu Pro Ser Ser Pro Asp His Glu Ser Pro Ser Gln Glu Ser Pro Asn Ala Pro Thr Ser Thr Ala Val Leu Gly Ser Trp Gly Ser Pro Pro Gln Pro Ser Leu Ala Pro Arg Glu Gln Glu Ala Pro Gly Thr Gln Trp Pro Leu Asp Glu Thr Ser Gly Ile Tyr Tyr Thr Glu Ile Arg Glu Arg Glu Arg Glu Lys Ser Glu Lys Gly Arg Pro Pro Trp Ala Ala Val Val Gly Thr Pro Pro Gln Ala His Thr Ser Leu Gln Pro His His Pro Trp Glu 

Pro Ser Val Arg Glu Ser Leu Cys Ser Thr Trp Pro Trp Lys Asn Glu Asp Phe Asn Gln Lys Phe Thr Gln Leu Leu Leu Gln Arg Pro His Pro Arg Ser Gln Asp Pro Leu Val Lys Arg Ser Trp Pro Asp Tyr Val Glu Glu Asn Arg Gly His Leu Ile Glu Ile Arg Asp Leu Phe Gly Pro Gly Leu Asp Thr Gln Glu Pro Arg Ile Val Ile Leu Gln Gly Ala Ala Gly Ile Gly Lys Ser Thr Leu Ala Arg Gln Val Lys Glu Ala Trp Gly Arg Gly Gln Leu Tyr Gly Asp Arg Phe Gln His Val Phe Tyr Phe Ser Cys Arg Glu Leu Ala Gln Ser Lys Val Val Ser Leu Ala Glu Leu Ile Gly Lys Asp Gly Thr Ala Thr Pro Ala Pro Ile Arg Gln Ile Leu Ser Arg Pro Glu Arg Leu Leu Phe Ile Leu Asp Gly Val Asp Glu Pro Gly Trp Val Leu Gln Glu Pro Ser Ser Glu Leu Cys Leu His Trp Ser Gln Pro Gln Pro Ala Asp Ala Leu Leu Gly Ser Leu Leu Gly Lys Thr Ile Leu Pro Glu Ala Ser Phe Leu Ile Thr Ala Arg Thr Thr Ala Leu Gln Asn Leu Ile Pro Ser Leu Glu Gln Ala Arg Trp Val Glu Val Leu Gly Phe Ser Glu Ser Ser Arg Lys Glu Tyr Phe Tyr Arg Tyr Phe Thr Asp Glu Arg Gln Ala Ile Arg Ala Phe Arg Leu Val Lys Ser Asn Lys Glu 

Leu Trp Ala Leu Cys Leu Val Pro Trp Val Ser Trp Leu Ala Cys Thr Cys Leu Met Gln Gln Met Lys Arg Lys Glu Lys Leu Thr Leu Thr Ser Lys Thr Thr Thr Leu Cys Leu His Tyr Leu Ala Gln Ala Leu Gln Ala Gln Pro Leu Gly Pro Gln Leu Arg Asp Leu Cys Ser Leu Ala Ala Glu Gly Ile Trp Gln Lys Lys Thr Leu Phe Ser Pro Asp Asp Leu Arg 590 1 Lys His Gly Leu Asp Gly Ala Ile Ile Ser Thr Phe Leu Lys Met Gly Ile Leu Gln Glu His Pro Ile Pro Leu Ser Tyr Ser Phe Ile His Leu Cys Phe Gln Glu Phe Phe Ala Ala Met Ser Tyr Val Leu Glu Asp Glu Lys Gly Arg Gly Lys His Ser Asn Cys Ile Ile Asp Leu Glu Lys Thr Leu Glu Ala Tyr Gly Ile His Gly Leu Phe Gly Ala Ser Thr Thr Arg Phe Leu Leu Gly Leu Leu Ser Asp Glu Gly Glu Arg Glu Met Glu Asn Ile Phe His Cys Arg Leu Ser Gln Gly Arg Asn Leu Met Gln Trp Val Pro Ser Leu Gln Leu Leu Gln Pro His Ser Leu Glu Ser Leu His Cys Leu Tyr Glu Thr Arg Asn Lys Thr Phe Leu Thr Gln Val Met Ala His Phe Glu Glu Met Gly Met Cys Val Glu Thr Asp Met Glu Leu Leu Val Cys Thr Phe Cys Ile Lys Phe Ser Arg His Val Lys Lys Leu Gln 

Leu Ile Glu Gly Arg Gln His Arg Ser Thr Trp Ser Pro Thr Met Val Val Leu Phe Arg Trp Val Pro Val Thr Asp Ala Tyr Trp Gln Ile Leu Phe Ser Val Leu Lys Val Thr Arg Asn Leu Lys Glu Leu Asp Leu Ser Gly Asn Ser Leu Ser His Ser Ala Val Lys Ser Leu Cys Lys Thr Leu Arg Arg Pro Arg Cys Leu Leu Glu Thr Leu Arg Leu Ala Gly Cys Gly Leu Thr Ala Glu Asp Cys Lys Asp Leu Ala Phe Gly Leu Arg Ala Asn Gln Thr Leu Thr Glu Leu Asp Leu Ser Phe Asn Val Leu Thr Asp Ala Gly Ala Lys His Leu Cys Gln Arg Leu Arg Gln Pro Ser Cys Lys Leu Gln Arg Leu Gln Leu Val Ser Cys Gly Leu Thr Ser Asp Cys Cys Gln Asp Leu Ala Ser Val Leu Ser Ala Ser Pro Ser Leu Lys Glu Leu Asp Leu Gln Gln Asn Asn Leu Asp Asp Val Gly Val Arg Leu Cys Glu Gly Leu Arg His Pro Ala Cys Lys Leu Ile Arg Leu Gly Lys Pro Ser Val Met Thr Pro Thr Glu Gly Leu Asp Thr Gly Glu Met Ser Asn Ser Thr Ser Ser Leu Lys Arg Gln Arg Leu Gly Ser Glu Arg Ala Ala Ser His Val Ala Gln Ala Asn Leu Lys Leu Leu Asp Val Ser Lys Ile Phe Pro Ile Ala Glu Ile Ala Glu Glu Ser Ser Pro Glu Val Val Pro Val

- Glu Leu Cys Val Pro Ser Pro Ala Ser Gln Gly Asp Leu His Thr 1025 1030 1035 1040
- Lys Pro Leu Gly Thr Asp Asp Phe Trp Gly Pro Thr Gly Pro Val 1045 1050 1055
- Ala Thr Glu Val Val Asp Lys Glu Lys Asn Leu Tyr Arg Val His Phe 1060 1065 1070
- Pro Val Ala Gly Ser Tyr Arg Trp Pro Asn Thr Gly Leu Cys Phe Val 1075 1080 1085
- Met Arg Glu Ala Val Thr Val Glu Ile Glu Phe Cys Val Trp Asp Gln
  1090 1095 1100
- Phe Leu Gly Glu Ile Asn Pro Gln His Ser Trp Met Val Ala Gly Pro 1105 1110 1115 1120
- Leu Leu Asp Ile Lys Ala Glu Pro Gly Ala Val Glu Ala Val His Leu 1125 1130 1135
- Pro His Phe Val Ala Leu Gln Gly Gly His Val Asp Thr Ser Leu Phe 1140 1145 1150
- Gln Met Ala His Phe Lys Glu Glu Gly Met Leu Leu Glu Lys Pro Ala 1155 1160 1165
- Arg Val Glu Leu His His Ile Val Leu Glu Asn Pro Ser Phe Ser Pro 1170 1175 1180
- Leu Gly Val Leu Leu Lys Met Ile His Asn Ala Leu Arg Phe Ile Pro 1185 1190 1195 1200
- Val Thr Ser Val Val Leu Leu Tyr His Arg Val His Pro Glu Glu Val 1205 1210 1215
- Thr Phe His Leu Tyr Leu Ile Pro Ser Asp Cys Ser Ile Arg Lys Glu 1220 1225 1230
- Leu Glu Leu Cys Tyr Arg Ser Pro Gly Glu Asp Gln Leu Phe Ser Glu 1235 1240 1245
- Phe Tyr Val Gly His Leu Gly Ser Gly Ile Arg Leu Gln Val Lys Asp 1250 1255 1260
- Lys Lys Asp Glu Thr Leu Val Trp Glu Ala Leu Val Lys Pro Gly Asp 1265 1270 1275 1280

	Leu M	1et	Pro		Thr 1285	Thr	Leu	Ile		Pro 1290	Ala	Arg	Ile		Val 1295	Pro	
	Ser E	Pro		Asp .300	Ala	Pro	Gln		Leu 1305	His	Phe	Val		Gln 1310	Tyr	Arg	
	Glu G		Leu 315	Ile	Ala	Arg		Thr L320	Ser	Val	Glu		Val 1325	Leu	Asp	Lys	
	Leu H	lis 830	Gly	Gln	Val		Ser 1335	Gln	Glu	Gln	_	Glu 1340	Arg	Val	Leu	Ala	
•	Glu <i>A</i> 1345	Asn '	Thr	Arg		Ser 1350	Gln	Met	Arg		Leu 1355	Phe	Ser	Leu		Gln 13 <sup>6</sup> 0	
	Ser I	rp .	Asp	_	Lys 1365	Cys	Lys	Asp		Leu 1370	Tyr	Gln	Ala		Lys 1375	Glu	
	Thr H	lis		His .380	Leu	Ile	Met		Leu 1385	Trp	Glu	Lys		Ser 1390	Lys	Lys	
	Gly I		Leu 395	Pro	Leu	Ser	Ser										
	<210><211><211><212><213>	+ 43 + DN	A	api∈	ens												
	<220><221><222>	CD		4332	2)												
	<400> atg g Met A	rct (															48
	aag a Lys I	_	-														96
	cac t			_		_					_	_		_	_	_	14

					gcc Ala											192
	_		-		gcc Ala 70											240
	_	_	_		gcc Ala	-	-		-							288
		_		-	gaa Glu			-								336
		_			atg Met					-	_	_			-	384
	_				aga Arg		-	-		_	_		-			432
	_	_		-	gaa Glu 150			-						-		480
	_			_	cat His				_	_					_	528
				_	gtg Val	_		_						_		576
_		_		-	gag Glu											624
-	-	_			att Ile											672
					ggc Gly 230											720

		_			acc Thr											768
			-		agc Ser		_									816
_					ttc Phe		_									864
	_	_		_	ccc Pro		_	_	-	_			_			912
			_		cat His 310					_	_					960
	_	_			gaa Glu		_		-		_	_		_	_	1008
			_		aca Thr	_			_		_	_	-			1056
		_	_		Gly ggg	-	_		_		_				-	1104
_	-		_	-	cag Gln		_			_		_				1152
		_			gcc Ala 390											1200
				_	ctc Leu				_		_	_				1248
	-	_		-	ccg Pro	_		-			_					1296

	_	_		-						aaa Lys			1344
			_			_	_	_		gct Ala	_	_	1392
										gtc Val			1440
				_		-				ttc Phe			1488
										aac Asn 510			1536
		_	_							gcc Ala			1584
_	_	_	_	~	_	_	 _	_		ctg Leu			1632
										gct Ala			1680
-	_		_			_	_	_	-	ctg Leu	_	_	1728
						-				gac Asp 590			1776
										aag Lys			1824
							_	_		att Ile			1872

-					ttt Phe 630						1920
-		-			cat His						1968
	_	_			ata Ile						2016
				_	tta Leu						2064
					ctg Leu						2112
_		_	-		ctg Leu 710						2160
-	_				cgg Arg						2208
		_			ggc Gly						2256
					att Ile						2304
					cag Gln						2352
					gtc Val 790						2400
		-			gtc Val						2448

		_	_	_			-		_	-	ctt Leu	_	_		_	2496
-	_		_	_		_			_		ttg Leu	_		-		2544
											860 8gg					2592
-						_					gtg Val					2640
	-				_	_	-	_	_	-	ccg Pro	_	_	_		2688
-	_	_	_	_	_	-	_				tct Ser					2736
_	-	_				-	-	-		_	ctg Leu	_			_	2784
_	_	_			_		-				cga Arg 940					2832
					-	-				_	ctg Leu				-	2880
	_						_	-	_		gag Glu					2928
				_		_	-				gag Glu			_		2976
		_				Leu					gtg Val 1					3024

cca att gct gag Pro Ile Ala Glu 1010			 
gaa ctc ttg tgc Glu Leu Leu Cys 1025		Pro Ala Ser	
aag cct ttg ggg Lys Pro Leu Gly		-	 
gct act gag gta Ala Thr Glu Val 1060	Val Asp Lys		l His Phe
cct gta gct ggc Pro Val Ala Gly 1075	Ser Tyr Arg	• -	 
atg aga gaa gcg Met Arg Glu Ala 1090			
ttc ctg ggt gag Phe Leu Gly Glu 1105		Gln His Ser	 -
ctg ctg gac atc Leu Leu Asp Ile	3 3 3 3	33 3	
cct cac ttt gtg Pro His Phe Val 1140	Ala Leu Gln		r Leu Phe
caa atg gcc cac Gln Met Ala His 1155	Phe Lys Glu		
agg gtg gag ctg Arg Val Glu Leu 1170			
ttg gga gtc ctc Leu Gly Val Leu 1185	-	Ile His Asn	

Val Thr Ser Val			gtc cat cct gag Val His Pro Glu	
	•		tgc tcc att cgc Cys Ser Ile Arc 1230	g Lys Ala
, ,	Glu Met Lys	-	gtg cga atc cad Val Arg Ile His 1245	-
			cgt tac act gtg Arg Tyr Thr Val	
		Ile Leu Pro	aag gaa ctg gag Lys Glu Leu Glu 1275	<del>-</del>
Tyr Arg Ser Pro	23 2 2	2 2	tcg gag ttc tac Ser Glu Phe Tyr	
			aaa gac aag aaa Lys Asp Lys Lys 1310	S Asp Glu
	Glu Ala Leu		gga gat ctc ato Gly Asp Leu Met 1325	<del>-</del>
-	-	-	gta cct tca cct Val Pro Ser Pro 1340	
gcc ccg cag ttg Ala Pro Gln Leu 1345	=	Val Asp Gln	tat cga gag cag Tyr Arg Glu Glr 1355	_
gcc cga gtg aca Ala Arg Val Thr				
gtg ctg agc cag Val Leu Ser Gln 1380			ctg gct gag aac Leu Ala Glu Asn 1390	Thr Arg

ccc agc cag atg cgg aag ctg ttc agc ttg agc cag tcc tgg gac cgg 4224 Pro Ser Gln Met Arg Lys Leu Phe Ser Leu Ser Gln Ser Trp Asp Arg 1400 1405 1395 aag tgc aaa gat gga ctc tac caa gcc ctg aag gag acc cat cct cac 4272 Lys Cys Lys Asp Gly Leu Tyr Gln Ala Leu Lys Glu Thr His Pro His 1410 1415 ctc att atg gaa ctc tgg gag aag ggc agc aaa aag gga ctc ctg cca 4320 Leu Ile Met Glu Leu Trp Glu Lys Gly Ser Lys Gly Leu Leu Pro 1425 1430 1435 1440 ctc agc agc tga 4332 Leu Ser Ser <210> 6 <211> 1443 <212> PRT <213> Homo sapiens <400> 6 Met Ala Gly Gly Ala Trp Gly Arg Leu Ala Cys Tyr Leu Glu Phe Leu Lys Lys Glu Glu Leu Lys Glu Phe Gln Leu Leu Ala Asn Lys Ala 25 His Ser Arg Ser Ser Ser Gly Glu Thr Pro Ala Gln Pro Glu Lys Thr 40 Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gln Tyr Gly Glu Gln 55 Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg 70 75 Ser Leu Cys Ala Gln Ala Gln Glu Gly Ala Gly His Ser Pro Ser Phe Pro Tyr Ser Pro Ser Glu Pro His Leu Gly Ser Pro Ser Gln Pro Thr 105 110 Ser Thr Ala Val Leu Met Pro Trp Ile His Glu Leu Pro Ala Gly Cys 120 Thr Gln Gly Ser Glu Arg Arg Val Leu Arg Gln Leu Pro Asp Thr Ser 135 140 Gly Arg Arg Trp Arg Glu Ile Ser Ala Ser Leu Leu Tyr Gln Ala Leu 155 Pro Ser Ser Pro Asp His Glu Ser Pro Ser Gln Glu Ser Pro Asn Ala 165 170 Pro Thr Ser Thr Ala Val Leu Gly Ser Trp Gly Ser Pro Pro Gln Pro 180 185 190 Ser Leu Ala Pro Arg Glu Gln Glu Ala Pro Gly Thr Gln Trp Pro Leu

200

205

```
Asp Glu Thr Ser Gly Ile Tyr Tyr Thr Glu Ile Arg Glu Arg Glu Arg
                        215
Glu Lys Ser Glu Lys Gly Arg Pro Pro Trp Ala Ala Val Val Gly Thr
                    230
                                        235
Pro Pro Gln Ala His Thr Ser Leu Gln Pro His His Pro Trp Glu
                                    250
Pro Ser Val Arg Glu Ser Leu Cys Ser Thr Trp Pro Trp Lys Asn Glu
            260
                                265
Asp Phe Asn Gln Lys Phe Thr Gln Leu Leu Leu Gln Arg Pro His
                            280
                                                 285
Pro Arg Ser Gln Asp Pro Leu Val Lys Arg Ser Trp Pro Asp Tyr Val
                        295
                                            300
Glu Glu Asn Arg Gly His Leu Ile Glu Ile Arg Asp Leu Phe Gly Pro
                    310
                                        315
Gly Leu Asp Thr Gln Glu Pro Arg Ile Val Ile Leu Gln Gly Ala Ala
                                    330
                325
Gly Ile Gly Lys Ser Thr Leu Ala Arg Gln Val Lys Glu Ala Trp Gly
            340
                                345
Arg Gly Gln Leu Tyr Gly Asp Arg Phe Gln His Val Phe Tyr Phe Ser
                            360
                                                365
Cys Arg Glu Leu Ala Gln Ser Lys Val Val Ser Leu Ala Glu Leu Ile
                        375
                                            380
Gly Lys Asp Gly Thr Ala Thr Pro Ala Pro Ile Arg Gln Ile Leu Ser
                    390
                                        395
Arg Pro Glu Arg Leu Leu Phe Ile Leu Asp Gly Val Asp Glu Pro Gly
                405
                                    410
Trp Val Leu Gln Glu Pro Ser Ser Glu Leu Cys Leu His Trp Ser Gln
                                425
            420
                                                    430
Pro Gln Pro Ala Asp Ala Leu Leu Gly Ser Leu Leu Gly Lys Thr Ile
        435
                            440
                                                445
Leu Pro Glu Ala Ser Phe Leu Ile Thr Ala Arg Thr Thr Ala Leu Gln
                        455
                                            460
Asn Leu Ile Pro Ser Leu Glu Gln Ala Arg Trp Val Glu Val Leu Gly
                                        475
Phe Ser Glu Ser Ser Arg Lys Glu Tyr Phe Tyr Arg Tyr Phe Thr Asp
                485
                                    490
Glu Arg Gln Ala Ile Arg Ala Phe Arg Leu Val Lys Ser Asn Lys Glu
                                505
Leu Trp Ala Leu Cys Leu Val Pro Trp Val Ser Trp Leu Ala Cys Thr
                            520
                                                525
Cys Leu Met Gln Gln Met Lys Arg Lys Glu Lys Leu Thr Leu Thr Ser
Lys Thr Thr Thr Leu Cys Leu His Tyr Leu Ala Gln Ala Leu Gln
545
                    550
                                        555
Ala Gln Pro Leu Gly Pro Gln Leu Arg Asp Leu Cys Ser Leu Ala Ala
                565
                                    570
Glu Gly Ile Trp Gln Lys Lys Thr Leu Phe Ser Pro Asp Asp Leu Arg
            580
                                585
                                                    590
```

```
Lys His Gly Leu Asp Gly Ala Ile Ile Ser Thr Phe Leu Lys Met Gly
                            600
Ile Leu Gln Glu His Pro Ile Pro Leu Ser Tyr Ser Phe Ile His Leu
                        615
Cys Phe Gln Glu Phe Phe Ala Ala Met Ser Tyr Val Leu Glu Asp Glu
                    630
                                        635
Lys Gly Arg Gly Lys His Ser Asn Cys Ile Ile Asp Leu Glu Lys Thr
                645
                                    650
Leu Glu Ala Tyr Gly Ile His Gly Leu Phe Gly Ala Ser Thr Thr Arg
                                665
Phe Leu Leu Gly Leu Leu Ser Asp Glu Gly Glu Arg Glu Met Glu Asn
                            680
                                                685
Ile Phe His Cys Arg Leu Ser Gln Gly Arg Asn Leu Met Gln Trp Val
                      695
                                            700
Pro Ser Leu Gln Leu Leu Gln Pro His Ser Leu Glu Ser Leu His
                    710
                                        715
Cys Leu Tyr Glu Thr Arg Asn Lys Thr Phe Leu Thr Gln Val Met Ala
                                    730
His Phe Glu Glu Met Gly Met Cys Val Glu Thr Asp Met Glu Leu Leu
                                745
Val Cys Thr Phe Cys Ile Lys Phe Ser Arg His Val Lys Lys Leu Gln
                            760
                                                765
Leu Ile Glu Gly Arg Gln His Arg Ser Thr Trp Ser Pro Thr Met Val
                        775
Val Leu Phe Arg Trp Val Pro Val Thr Asp Ala Tyr Trp Gln Ile Leu
                    790
                                        795
Phe Ser Val Leu Lys Val Thr Arg Asn Leu Lys Glu Leu Asp Leu Ser
                                    810
Gly Asn Ser Leu Ser His Ser Ala Val Lys Ser Leu Cys Lys Thr Leu
                                825
            820
Arg Arg Pro Arg Cys Leu Leu Glu Thr Leu Arg Leu Ala Gly Cys Gly
                            840
Leu Thr Ala Glu Asp Cys Lys Asp Leu Ala Phe Gly Leu Arg Ala Asn
                        855
                                            860
Gln Thr Leu Thr Glu Leu Asp Leu Ser Phe Asn Val Leu Thr Asp Ala
                    870
                                        875
Gly Ala Lys His Leu Cys Gln Arg Leu Arg Gln Pro Ser Cys Lys Leu
                                    890
                                                        895
Gln Arg Leu Gln Leu Val Ser Cys Gly Leu Thr Ser Asp Cys Cys Gln
                                905
Asp Leu Ala Ser Val Leu Ser Ala Ser Pro Ser Leu Lys Glu Leu Asp
                            920
Leu Gln Gln Asn Asn Leu Asp Asp Val Gly Val Arg Leu Leu Cys Glu
                        935
                                            940
Gly Leu Arq His Pro Ala Cys Lys Leu Ile Arq Leu Gly Lys Pro Ser
                                        955
                                                            960
Val Met Thr Pro Thr Glu Gly Leu Asp Thr Gly Glu Met Ser Asn Ser
                965
                                    970
```

	ser		Lys	Arg	Gln	Arg		Gly	Ser	Glu	Arg		Ala	Ser	
		980					985					990			
His Val	Ala	Gln	Ala	Asn	Leu	Lys	Leu	Leu	Asp	Val	Ser	Lys	Ile	Phe	
	995				-	1000				1	1005				
Pro Ile	Ala	Glu	Ile	Ala	Glu	Glu	Ser	Ser	Pro	Glu	Val	Val	Pro	Val	
1010				1	1015				-	1020					
Glu Leu	Leu	Cys	Val	Pro	Ser	Pro	Ala	Ser	Gln	Gly	Asp	Leu	His	Thr	
1025			1	1030					1035					1040	
Lys Pro	Leu	Glv	Thr	Asp	Asp	Asp	Phe	Trp	Glv	Pro	Thr	Gly	Pro	Val	
-		_	045	-	-	-		1050	-4			_	1055		
Ala Thr	Glu			Asp	Lvs	Glu			Len	Tur	Ara			Phe	
1120 1112		060					1065			- 1 -		1070			
Dro Val			C0.x	Пттх	7 ~~			7 an	Пhх	C1.,			Dho	17-1	
Pro Val		GIY	ser	ıyı			PIO	ASII	1111			Суѕ	rne	vaı	•
	.075	<b>.</b> .		m 1		1080	<b>~</b> 1	<b>61</b>	70.1		1085		-	<b>61</b>	
Met Arg	Glu	Ата	Val			GLu	шe	Glu			vaı	Trp	Asp	GIn	
1090					L095					1100					
Phe Leu	Gly	Glu	Ile	Asn	Pro	Gln	His	Ser	Trp	Met	Val	Ala	Gly	Pro	
1105			]	1110				1	1115				-	1120	
Leu Leu	Asp	Ile	Lys	Ala	Glu	Pro	Gly	Ala	Val	Glu	Ala	Val	His	Leu	
		1	125				1	L130				-	1135		
Pro His	Phe	Val	Ala	Leu	Gln	Gly	Gly	His	Val	Asp	Thr	Ser	Leu	Phe	
	1	140				1	L145				-	1150			
Gln Met	Ala	His	Phe	Lys	Glu	Glu	Gly	Met	Leu	Leu	Glu	Lys	Pro	Ala	
	155			-		160	_				.165	-			
Arg Val	Glu	Leu	His	His	Ile	Val	Leu	Glu	Asn	Pro	Ser	Phe	Ser	Pro	
Arg Val	Glu	Leu	His			Val	Leu	Glu			Ser	Phe	Ser	Pro	
1170				1	175				1	180					
1170 Leu Gly			Leu	1 Lys	175			Asn	Ala	180			Ile	Pro	
1170 Leu Gly 1185	Val	Leu	Leu 1	1 Lys 190	Met	Ile	His	Asn 1	1 Ala 1195	180 Leu	Arg	Phe	Ile	Pro 1200	
1170 Leu Gly	Val	Leu Val	Leu 1 Val	1 Lys 190	Met	Ile	His His	Asn Arg	1 Ala 1195	180 Leu	Arg	Phe Glu	Ile Glu	Pro 1200	
1170 Leu Gly 1185 Val Thr	Val Ser	Leu Val 1	Leu 1 Val 205	Lys 1190 Leu	Met Leu	Ile Tyr	His His	Asn Arg 210	Ala Ala 1195 Val	Leu His	Arg Pro	Phe Glu	Ile Glu 1215	Pro 1200 Val	
1170 Leu Gly 1185	Val Ser His	Leu Val 1 Leu	Leu 1 Val 205	Lys 1190 Leu	Met Leu	Ile Tyr Pro	His His Ser	Asn Arg 210	Ala Ala 1195 Val	Leu His	Arg Pro Ile	Phe Glu Arg	Ile Glu 1215	Pro 1200 Val	
1170 Leu Gly 1185 Val Thr	Val Ser His 1	Leu Val 1 Leu 220	Leu Val 205 Tyr	Lys 190 Leu Leu	Met Leu Ile	Ile Tyr Pro	His His Ser 1225	Asn Arg 210 Asp	Ala 1195 Val Cys	Leu His Ser	Arg Pro Ile	Phe Glu Arg 1230	Ile Glu 1215 Lys	Pro 1200 Val Ala	
1170 Leu Gly 1185 Val Thr Thr Phe	Val Ser His 1 Asp	Leu Val 1 Leu 220 Leu	Leu 1 Val 205 Tyr Glu	Lys 190 Leu Leu Met	Met Leu Ile Lys	Ile Tyr Pro	His His Ser 1225 Gln	Asn Arg 210 Asp	Ala 1195 Val Cys	Leu His Ser	Arg Pro Ile Ile	Phe Glu Arg 1230 His	Ile Glu 1215 Lys	Pro 1200 Val Ala	
1170 Leu Gly 1185 Val Thr Thr Phe	Val Ser His 1 Asp 235	Leu Val 1 Leu 220 Leu	Leu Val 205 Tyr Glu	Lys 190 Leu Leu Met	175 Met Leu Ile Lys	Ile Tyr Pro 1 Phe 240	His His Ser 1225 Gln	Asn Arg 210 Asp Phe	Ala 1195 Val Cys	Leu His Ser Arg	Arg Pro Ile Ile .245	Phe Glu Arg 1230 His	Ile Glu 1215 Lys Lys	Pro 1200 Val Ala Pro	
1170 Leu Gly 1185 Val Thr Thr Phe	Val Ser His 1 Asp 235	Leu Val 1 Leu 220 Leu	Leu Val 205 Tyr Glu	Lys 190 Leu Leu Met	175 Met Leu Ile Lys Tyr	Ile Tyr Pro 1 Phe 240	His His Ser 1225 Gln	Asn Arg 210 Asp Phe	Ala 1195 Val Cys Val	His Ser Arg Tyr	Arg Pro Ile Ile .245	Phe Glu Arg 1230 His	Ile Glu 1215 Lys Lys	Pro 1200 Val Ala Pro	
1170 Leu Gly 1185 Val Thr Thr Phe	Val Ser His 1 Asp 235	Leu Val 1 Leu 220 Leu	Leu Val 205 Tyr Glu	Lys 190 Leu Leu Met	175 Met Leu Ile Lys	Ile Tyr Pro 1 Phe 240	His His Ser 1225 Gln	Asn Arg 210 Asp Phe	Ala 1195 Val Cys Val	Leu His Ser Arg	Arg Pro Ile Ile .245	Phe Glu Arg 1230 His	Ile Glu 1215 Lys Lys	Pro 1200 Val Ala Pro	
1170 Leu Gly 1185 Val Thr Thr Phe Ile Asp 1 Pro Pro	Val Ser His 1 Asp 235 Leu	Leu Val 1 Leu 220 Leu Thr	Leu Val 205 Tyr Glu Pro	Lys 190 Leu Leu Met Leu	Leu Lys Tyr .255	Tyr Pro Phe 240 Met	His His Ser 1225 Gln Gly	Asn Arg 210 Asp Phe Cys	Ala 1195 Val Cys Val Arg	His Ser Arg Tyr	Arg Pro Ile Ile .245 Thr	Phe Glu Arg 1230 His	Ile Glu 1215 Lys Lys Ser	Pro 1200 Val Ala Pro	
1170 Leu Gly 1185 Val Thr Thr Phe Ile Asp 1 Pro Pro 1250	Val Ser His 1 Asp 235 Leu	Leu Val 1 Leu 220 Leu Thr	Leu Val 205 Tyr Glu Pro	Lys 190 Leu Leu Met Leu	Leu Lys Tyr	Tyr Pro Phe 240 Met	His His Ser 1225 Gln Gly	Asn Arg 210 Asp Phe Cys	Ala 1195 Val Cys Val Arg	His Ser Arg Tyr	Arg Pro Ile Ile .245 Thr	Phe Glu Arg 1230 His	Ile Glu 1215 Lys Lys Ser Leu	Pro 1200 Val Ala Pro	
1170 Leu Gly 1185 Val Thr Thr Phe Ile Asp 1 Pro Pro 1250 Ser Gly	Val Ser His 1 Asp 235 Leu Ser	Leu Val 1 Leu 220 Leu Thr	Leu 1 Val 205 Tyr Glu Pro Met	Lys 190 Leu Leu Met Leu Leu Leu	Leu Lys Tyr .255 Glu	Tyr Pro Phe 240 Met	His His Ser 1225 Gln Gly Leu	Asn Arg 210 Asp Phe Cys Pro	Ala 1195 Val Cys Val Arg Lys	His Ser Arg Tyr .260 Glu	Arg Pro Ile Ile 245 Thr	Phe Glu Arg 1230 His Val	Ile Glu 1215 Lys Lys Ser	Pro 1200 Val Ala Pro Gly Cys	
1170 Leu Gly 1185 Val Thr Thr Phe Ile Asp 1 Pro Pro 1250 Ser Gly 1265	Val Ser His 1 Asp 235 Leu Ser	Leu Val Leu 220 Leu Thr Gly	Leu 1 Val 205 Tyr Glu Pro Met	Lys 190 Leu Leu Met Leu Leu Leu	Leu Lys Tyr .255 Glu	Tyr Pro Phe 240 Met	His His Ser 1225 Gln Gly Leu Leu	Asn Arg 210 Asp Phe Cys Pro	Ala 1195 Val Cys Val Arg Lys	His Ser Arg Tyr .260 Glu	Arg Pro Ile Ile 245 Thr	Phe Glu Arg 1230 His Val Glu Tyr	Ile Glu 1215 Lys Lys Ser	Pro 1200 Val Ala Pro Gly Cys	
1170 Leu Gly 1185 Val Thr Thr Phe Ile Asp 1 Pro Pro 1250 Ser Gly 1265	Val Ser His 1 Asp 235 Leu Ser	Leu Val 1 Leu 220 Leu Thr Gly Pro	Leu Val 205 Tyr Glu Pro Met Gly 285	Lys 190 Leu Leu Met Leu Leu Control Leu Control Leu Control Control Leu Control Contro	Leu Lys Tyr 255 Glu Asp	Tyr Pro Phe 240 Met Ile	His His Ser 1225 Gln Gly Leu Leu	Asn Arg 210 Asp Phe Cys Pro I Phe 290	Ala 1195 Val Cys Val Arg Lys 1275 Ser	His Ser Arg Tyr .260 Glu	Arg Pro Ile Ile .245 Thr Leu Phe	Phe Glu Arg 1230 His Val Glu Tyr	Ile Glu 1215 Lys Lys Ser Leu Val 1295	Pro 1200 Val Ala Pro Gly Cys 1280 Gly	
1170 Leu Gly 1185 Val Thr Thr Phe Ile Asp 1 Pro Pro 1250 Ser Gly 1265 Tyr Arg	Val Ser His 1 Asp 235 Leu Ser Ser	Leu Val Leu 220 Leu Thr Gly Pro 1 Ser	Leu Val 205 Tyr Glu Pro Met Gly 285	Lys 190 Leu Leu Met Leu Leu Control Leu Control Leu Control Control Leu Control Contro	Leu Lys Tyr 255 Glu Asp	Ile Tyr Pro Phe 240 Met Ile Gln Leu	His His Ser 1225 Gln Gly Leu Leu	Asn Arg 210 Asp Phe Cys Pro I Phe 290	Ala 1195 Val Cys Val Arg Lys 1275 Ser	His Ser Arg Tyr .260 Glu	Arg Pro Ile Ile .245 Thr Leu Phe Lys	Phe Glu Arg 1230 His Val Glu Tyr	Ile Glu 1215 Lys Lys Ser Leu Val 1295	Pro 1200 Val Ala Pro Gly Cys 1280 Gly	
1170 Leu Gly 1185 Val Thr Thr Phe Ile Asp 1 Pro Pro 1250 Ser Gly 1265 Tyr Arg His Leu	Val Ser His 1 Asp 235 Leu Ser Ser Gly 1	Leu Val 1 Leu 220 Leu Thr Gly Pro 1 Ser 300	Leu  Val  205 Tyr  Glu  Pro  Met  Gly 285 Gly	Lys 190 Leu Leu Met Leu 1 Leu 270 Glu	Leu Lys Tyr .255 Glu Asp	Ile Tyr Pro Phe 240 Met Ile Gln Leu	His His Ser 1225 Gln Gly Leu Leu Gln 305	Asn Arg 210 Asp Phe Cys Pro Phe 290 Val	Ala 1195 Val Cys Val Arg 1 Lys 275 Ser	His Ser Arg Tyr .260 Glu Glu	Arg Pro Ile Ile 245 Thr Leu Phe Lys	Phe Glu Arg 1230 His Val Glu Tyr Lys 1310	Ile Glu 1215 Lys Lys Ser Leu Val 1295 Asp	Pro 1200 Val Ala Pro Gly Cys 1280 Gly Glu	
1170 Leu Gly 1185 Val Thr Thr Phe Ile Asp Pro Pro 1250 Ser Gly 1265 Tyr Arg His Leu Thr Leu	Val Ser His 1 Asp 235 Leu Ser Gly Val	Leu Val 1 Leu 220 Leu Thr Gly Pro 1 Ser 300	Leu  Val  205 Tyr  Glu  Pro  Met  Gly 285 Gly	Lys 190 Leu Leu Met Leu 1 Leu 270 Glu	Leu Lys Tyr 255 Glu Asp Arg	Tyr Pro Phe 240 Met Ile Gln Leu Val	His His Ser 1225 Gln Gly Leu Leu Gln 305	Asn Arg 210 Asp Phe Cys Pro Phe 290 Val	Ala 1195 Val Cys Val Arg 1 Lys 275 Ser	His Ser Arg Tyr 260 Glu Glu Asp	Arg Pro Ile Ile 245 Thr Leu Phe Lys Leu	Phe Glu Arg 1230 His Val Glu Tyr Lys 1310	Ile Glu 1215 Lys Lys Ser Leu Val 1295 Asp	Pro 1200 Val Ala Pro Gly Cys 1280 Gly Glu	
1170 Leu Gly 1185 Val Thr Thr Phe Ile Asp 1 Pro Pro 1250 Ser Gly 1265 Tyr Arg His Leu Thr Leu	Val Ser His 1 Asp 235 Leu Ser Gly 1 Val 315	Leu Val Leu 220 Leu Thr Gly Pro 1 Ser 300 Trp	Leu Val 205 Tyr Glu Pro Met Gly 285 Gly Glu	Lys 190 Leu Leu Met Leu 270 Glu Ile	Leu Lys Tyr .255 Glu Asp Arg Leu	Tyr Pro Phe 240 Met Ile Gln Leu Val 320	His His Ser 1225 Gln Gly Leu Leu Gln 305 Lys	Asn Arg 210 Asp Phe Cys Pro Phe 290 Val	Ala 1195 Val Cys Val Arg 1 Lys 1275 Ser Lys	His Ser Arg Tyr 260 Glu Asp Asp	Arg Pro Ile Ile 245 Thr Leu Phe Lys Leu 325	Phe Glu Arg 1230 His Val Glu Tyr Lys 1310 Met	Ile Glu 1215 Lys Lys Ser Leu Val 1295 Asp	Pro 1200 Val Ala Pro Gly Cys 280 Gly Glu Ala	
1170 Leu Gly 1185 Val Thr Thr Phe Ile Asp 1250 Ser Gly 1265 Tyr Arg His Leu Thr Leu 1 Thr Thr	Val Ser His 1 Asp 235 Leu Ser Gly 1 Val 315	Leu Val Leu 220 Leu Thr Gly Pro 1 Ser 300 Trp	Leu Val 205 Tyr Glu Pro Met Gly 285 Gly Glu	Lys 190 Leu Leu Met Leu 270 Glu Ile Ala Pro	Leu Lys Tyr 255 Glu Asp Arg Leu Ala	Tyr Pro Phe 240 Met Ile Gln Leu Val 320	His His Ser 1225 Gln Gly Leu Leu Gln 305 Lys	Asn Arg 210 Asp Phe Cys Pro Phe 290 Val	Ala 1195 Val Cys Val Arg 1 Lys 275 Ser Lys Gly Val	His Ser Arg Tyr 260 Glu Glu Asp Asp Pro	Arg Pro Ile Ile 245 Thr Leu Phe Lys Leu 325	Phe Glu Arg 1230 His Val Glu Tyr Lys 1310 Met	Ile Glu 1215 Lys Lys Ser Leu Val 1295 Asp	Pro 1200 Val Ala Pro Gly Cys 280 Gly Glu Ala	
1170 Leu Gly 1185 Val Thr Thr Phe Ile Asp 1 Pro Pro 1250 Ser Gly 1265 Tyr Arg His Leu Thr Leu	Val Ser His 1 Asp 235 Leu Ser Gly Val 315 Leu	Leu Val Leu 220 Leu Thr Gly Pro 1 Ser 300 Trp Ile	Leu Val 205 Tyr Glu Pro Met 1 Gly 285 Gly Glu Pro	Lys 190 Leu Leu Met Leu 270 Glu Ile Ala Pro	Leu Lys Tyr 255 Glu Asp Arg Leu Ala	Tyr Pro Phe 240 Met Ile Gln Leu Val 320 Arg	His His Ser 1225 Gln Gly Leu Leu 1 Gln 305 Lys Ile	Asn Arg 210 Asp Phe Cys Pro 1 Phe 290 Val Pro Ala	Ala 1195 Val Cys Val Arg Lys 1275 Ser Lys Gly Val	His Ser Arg Tyr 260 Glu Glu Asp Asp Pro 340	Arg Pro Ile Ile 245 Thr Leu Phe Lys Leu 325 Ser	Phe Glu Arg 1230 His Val Glu Tyr Lys 1310 Met Pro	Ile Glu 1215 Lys Lys Ser Leu Val 1295 Asp Pro	Pro 1200 Val Ala Pro Gly Cys 1280 Gly Glu Ala Asp	

Ala Arg Val Thr Ser Val Glu Val Val Leu Asp Lys Leu His Gly Gln 1370 1365 Val Leu Ser Gln Glu Gln Tyr Glu Arg Val Leu Ala Glu Asn Thr Arg 1380 1385 Pro Ser Gln Met Arq Lys Leu Phe Ser Leu Ser Gln Ser Trp Asp Arq 1400 Lys Cys Lys Asp Gly Leu Tyr Gln Ala Leu Lys Glu Thr His Pro His 1415 1420 Leu Ile Met Glu Leu Trp Glu Lys Gly Ser Lys Lys Gly Leu Leu Pro 1430 1435 1440 Leu Ser Ser

<210> 7
<211> 1487
<212> DNA
<213> Homo sapiens
<220>
<221> CDS
<222> (1)..(1296)

atg atg aga cag agg cag agc cat tat tgt tcc gtg ctg ttc ctg agt 48
Met Met Arg Gln Arg Gln Ser His Tyr Cys Ser Val Leu Phe Leu Ser
1 5 10 15

gtc aac tat ctg ggg ggg aca ttc cca gga gac att tgc tca gaa gag 96 Val Asn Tyr Leu Gly Gly Thr Phe Pro Gly Asp Ile Cys Ser Glu Glu 20 25 30

aat caa ata gtt tcc tct tat gct tct aaa gtc tgt ttt gag atc gaa 144 Asn Gln Ile Val Ser Ser Tyr Ala Ser Lys Val Cys Phe Glu Ile Glu 35 40 45

gaa gat tat aaa aat cgt cag ttt ctg ggg cct gaa gga aat gtg gat 192 Glu Asp Tyr Lys Asn Arg Gln Phe Leu Gly Pro Glu Gly Asn Val Asp 50 55 60

gtt gag ttg att gat aag agc aca aac aga tac agc gtt tgg ttc ccc 240 Val Glu Leu Ile Asp Lys Ser Thr Asn Arg Tyr Ser Val Trp Phe Pro 65 70 75 80

act gct ggc tgg tat ctg tgg tca gcc aca ggc ctc ggc ttc ctg gta 288
Thr Ala Gly Trp Tyr Leu Trp Ser Ala Thr Gly Leu Gly Phe Leu Val
85 90 95

	_		-			_							_	cag Gln		336
_	_	_	_	_	_			-	-		_			ggc Gly		384
_		_	~		_					_	_	_	-	atc Ile		432
											-	_		tgg Trp		480
	_	_			_		-		-	-	_			cca Pro 175	-	528
, ,						_	_	_	_	_		_		tct Ser	-	576
_			_	_			_	_			_			atc Ile		624
					_								-	gat Asp		672
_			-			-		_	_	_	_			aag Lys		720
	_	-		_	-	_					-	_	_	act Thr 255	_	768
		_	_											tct Ser		816
	_		_		-	_		_		_		_		tac Tyr		864

-			-						aaa Lys							912
,	_								gaa Glu		-				-	960
		_				_			gat Asp 330		_		_	_	_	1008
									gcc Ala							1056
				~		_		_	ctg Leu					_	-	1104
	_	_			_				aat Asn							1152
									gag Glu							1200
	-			-	-	_	_	_	gtg Val 410			_	-		_	1248
-		-							ctt Leu	_	-	_		_	taa	1296
aato	gagto	cag t	tago	gtagt	c to	ggaag	gagaç	g aat	ccaç	gcgt	tcto	catto	gga a	aatgo	gataaa	1356
caga	aaato	gtg a	atcat	tgat	et to	cagto	gttca	a aga	acaga	aaga	agad	ctggg	gta a	acato	ctatca	1416
caca	aggct	tt d	cagga	acaga	ac tt	gtaa	accto	g gca	atgta	acct	atto	gacto	gta t	ccto	catgca	1476
tttt	cct	caa q	J													1487

<210> 8

<211> 431

<212> PRT

<400> 8 Met Met Arg Gln Arg Gln Ser His Tyr Cys Ser Val Leu Phe Leu Ser Val Asn Tyr Leu Gly Gly Thr Phe Pro Gly Asp Ile Cys Ser Glu Glu Asn Gln Ile Val Ser Ser Tyr Ala Ser Lys Val Cys Phe Glu Ile Glu Glu Asp Tyr Lys Asn Arg Gln Phe Leu Gly Pro Glu Gly Asn Val Asp Val Glu Leu Ile Asp Lys Ser Thr Asn Arg Tyr Ser Val Trp Phe Pro Thr Ala Gly Trp Tyr Leu Trp Ser Ala Thr Gly Leu Gly Phe Leu Val Arg Asp Glu Val Thr Val Thr Ile Ala Phe Gly Ser Trp Ser Gln His Leu Ala Leu Asp Leu Gln His His Glu Gln Trp Leu Val Gly Gly Pro Leu Phe Asp Val Thr Ala Glu Pro Glu Glu Ala Val Ala Glu Ile His Leu Pro His Phe Ile Ser Leu Gln Gly Glu Val Asp Val Ser Trp Phe Leu Val Ala His Phe Lys Asn Glu Gly Met Val Leu Glu His Pro Ala Arg Val Glu Pro Phe Tyr Ala Val Leu Glu Ser Pro Ser Phe Ser Leu Met Gly Ile Leu Leu Arg Ile Ala Ser Gly Thr Arg Leu Ser Ile Pro Ile Thr Ser Asn Thr Leu Ile Tyr Tyr His Pro His Pro Glu Asp Ile Lys Phe His Leu Tyr Leu Val Pro Ser Asp Ala Leu Leu Thr Lys Ala Ile Asp Asp Glu Glu Asp Arg Phe His Gly Val Arg Leu Gln Thr Ser Pro Pro Met Glu Pro Leu Asn Phe Gly Ser Ser Tyr Ile Val Ser Asn Ser Ala Asn Leu Lys Val Met Pro Lys Glu Leu Lys Leu Ser Tyr Arg Ser Pro Gly Glu Ile Gln His Phe Ser Lys Phe Tyr Ala Gly Gln Met Lys Glu Pro Ile Gln Leu Glu Ile Thr Glu Lys Arg His Gly Thr Leu Val Trp Asp Thr Glu Val Lys Pro Val Asp Leu Gln Leu Val Ala Ala Ser Ala Pro Pro Pro Phe Ser Gly Ala Ala Phe Val Lys Glu Asn His Arg Gln Leu Gln Ala Arg Met Gly Asp Leu Lys Gly Val Leu Asp Asp

		555					500					500				
Leu	Gln 370	Asp	Asn	Glu	Val	Leu 375	Thr	Glu	Asn	Glu	Lys 380	Glu	Leu	Val	Glu	
Gln 385	Glu	Lys	Thr	Arg	Gln 390	Ser	Lys	Asn	Glu	Ala 395	Leu	Leu	Ser	Met	Val 400	
Glu	Lys	Lys	Gly	Asp 405	Leu	Ala	Leu	Asp	Val 410	Leu	Phe	Arg	Ser	Ile 415	Ser	
Glu	Arg	Asp	Pro 420	Tyr	Leu	Val	Ser	Tyr 425	Leu	Arg	Gln	Gln	Asn 430	Leu		
<210	)> 9															
<211	L> 45	556							•						•	
	2> DN			_												
<213	3> A1	ctifi	icial	l Sec	queno	ce										
<220 <221	)> L> CI	os														
	2> (1		(4362	2)												
<220																
<223		escri onsti	_	on of	E Art	tific	cial	Sequ	ience	e: Sy	ynthe	etic				
<400	)> 9															
		ggc	gga	gcc	tgg	ggc	cgc	ctg	gcc	tgt	tac	ttg	gag	ttc	ctg	48
				Ala												
1				5					10					15		
aag	aag	gag	gag	ctg	aag	gag	ttc	cag	ctt	ctg	ctc	gcc	aat	aaa	gcg	96
Lys	Lys	Glu	Glu	Leu	Lys	Glu	Phe		Leu	Leu	Leu	Ala		Lys	Ala	
			20					25					30			-
cac	tcc	agg	agc	tct	tcg	ggt	gag	aca	ccc	gct	cag	cca	gag	aag	acg	144
His	Ser	_	Ser	Ser	Ser	Gly		Thr	Pro	Ala	Gln		Glu	Lys	Thr	
		35					40					45				
agt	ggc	atg	gag	gtg	gcc	tcg	tac	ctg	gtg	gct	cag	tat	ggg	gag	cag	192
Ser	_	Met	Glu	Val	Ala		Tyr	Leu	Val	Ala		Tyr	Gly	Glu	Gln	
	50					55					60					
cgg	gcc	tgg	gac	cta	gcc	ctc	cat	acc	tgg	gag	cag	atg	ggg	ctg	agg	240
_	Ala	Trp	Asp	Leu		Leu	His	Thr	Trp		Gln	Met	Gly	Leu	_	
65					70					75					80	
tca	cta	tqc	qcc	caa	gcc	caq	gaa	gaa	gca	ggc	cac	tct	ccc	tca	ttc	288
	_	_	-	Gln	-	-	_		-							

	85	90	95
Pro Tyr Ser		<del>-</del>	cet cee age caa eee ace 336 Ger Pro Ser Gln Pro Thr 110
			aa ttg ccg gcg ggg tgc 384 ilu Leu Pro Ala Gly Cys 125
2 2 2			ag ctg cct gac aca tct 432 In Leu Pro Asp Thr Ser 140
33 3 3	33 3 3	Ser Ala Ser Le	etc ctc tac caa gct ctt 480 eeu Leu Tyr Gln Ala Leu 55 160
-			ag gag tca ccc aac gcc 528 In Glu Ser Pro Asn Ala 175
Pro Thr Ser			ga tcc cca cct cag ccc 576 ly Ser Pro Pro Gln Pro 190
3			gg acc caa tgg cct ctg 624 ly Thr Gln Trp Pro Leu 205
			tc aga gaa aga gag aga 672 le Arg Glu Arg Glu Arg 220
	• • • • • • • • • • • • • • • • • • • •	Pro Pro Trp Al	ca gcg gtg gta gga acg 720 la Ala Val Val Gly Thr 35 240
· .		_	ac cac cac cca tgg gag 768 is His His Pro Trp Glu 255
Pro Ser Val A			gg ccc tgg aaa aat gag 816 rp Pro Trp Lys Asn Glu 270

gat ttt aac caa aaa ttc aca cag ctg cta ctt cta caa aga cct cac Asp Phe Asn Gln Lys Phe Thr Gln Leu Leu Leu Gln Arg Pro His 275 280 285

ccc aga agc caa gat ccc ctg gtc aag aga agc tgg cct gat tat gtg 912

	-	-		_		_	gtc Val	_	_	_			gat Asp			912
			_				att Ile									960
	_	_			-		cgc Arg		-		_	_		-	_	1008
			_				gcc Ala									1056
							cgc Arg 360									1104
-	_		_	_			aag Lys									1152
							ccg Pro									1200
							atc Ile									1248
	-	_			_	_	tct Ser			_	_				=	1296
							ctg Leu 440									1344
Pro ctt	Gln	Pro 435 gag	Ala gca	Asp	Ala	Leu ctg	Leu	Gly acg	Ser gct	Leu cgg	Leu acc	Gly 445 aca	Lys gct	Thr ctg	Ile cag	1344

465	470		475	480
ttc tct gag tcc Phe Ser Glu Ser				
gaa agg caa gca Glu Arg Gln Ala 500				
ctc tgg gcc ctg Leu Trp Ala Leu 515				_
tgc ctg atg cag Cys Leu Met Gln 530				
aag acc acc aca Lys Thr Thr Thr 545	-		, , ,	
gct cag cca ttg Ala Gln Pro Leu				
gag ggc atc tgg Glu Gly Ile Trp 580	-			
aag cat ggg tta Lys His Gly Leu 595				
att ctt caa gag Ile Leu Gln Glu 610		, ,	_	
tgt ttc caa gag Cys Phe Gln Glu 625		-		
aag ggg aga ggt Lys Gly Arg Gly		-		
cta gaa gca tat Leu Glu Ala Tyr				<u>-</u>

		_		ctg Leu		-	-				_		_			2064
				cgg Arg												2112
_		_	_	ctg Leu	_	-	_				-					2160
-	_			act Thr 725												2208
		-	-	atg Met		_	_									2256
	_			tgc Cys				-	-			_	-		_	2304
_			5 5	agg Arg	_		_				•			_	_	2352
_	_			tgg Trp	_		-		_	_			_			2400
		_		aag Lys 805	_		_		-	_		_	_		_	2448
		_	_	agc Ser			_		_	=						2496
_	_		_	tgc Cys		-										2544
		-		gac Asp	_	_	-		_							2592

	850					855					860					
														•		
cag	acc	ctg	acc	gag	ctg	gac	ctg	agc	ttc	aat	gtg	ctc	acg	gat	gct	
Gln	Thr	Leu	Thr	Glu	Leu	Asp	Leu	Ser	Phe	Asn	Val	Leu	Thr	Asp	Ala	
865					870					875					880	

gga gcc aaa cac ctt tgc cag aga ctg aga cag ccg agc tgc aag cta Gly Ala Lys His Leu Cys Gln Arg Leu Arg Gln Pro Ser Cys Lys Leu 

cag cga ctg cag ctg gtc agc tgt ggc ctc acg tct gac tgc tgc cag Gln Arg Leu Gln Leu Val Ser Cys Gly Leu Thr Ser Asp Cys Cys Gln 

gac ctg gcc tct gtg ctt agt gcc agc ccc agc ctg aag gag cta gac Asp Leu Ala Ser Val Leu Ser Ala Ser Pro Ser Leu Lys Glu Leu Asp 

ctg cag cag aac aac ctg gat gac gtt ggc gtg cga ctg ctc tgt gag Leu Gln Gln Asn Asn Leu Asp Asp Val Gly Val Arg Leu Leu Cys Glu 

ggg ctc agg cat cct gcc tgc aaa ctc ata cgc ctg ggg ctg gac cag Gly Leu Arg His Pro Ala Cys Lys Leu Ile Arg Leu Gly Leu Asp Gln 

aca act ctg agt gat gag atg agg cag gaa ctg agg gcc ctg gag cag Thr Thr Leu Ser Asp Glu Met Arg Gln Glu Leu Arg Ala Leu Glu Gln 

gag aaa cct cag ctg ctc atc ttc agc aga cgg aaa cca agt gtg atg Glu Lys Pro Gln Leu Leu Ile Phe Ser Arg Arg Lys Pro Ser Val Met 

acc cct act gag ggc ctg gat acg gga gag atg agt aat agc aca tcc Thr Pro Thr Glu Gly Leu Asp Thr Gly Glu Met Ser Asn Ser Thr Ser 

tca ctc aag cgg cag aga ctc gga tca gag agg gcg gct tcc cat gtt Ser Leu Lys Arg Gln Arg Leu Gly Ser Glu Arg Ala Ala Ser His Val 

gct cag gct aat ctc aaa ctc ctg gac gtg agc aag atc ttc cca att Ala Gln Ala Asn Leu Lys Leu Leu Asp Val Ser Lys Ile Phe Pro Ile 

gct gag att gca gag gaa agc tcc cca gag gta gta ccg gtg gaa ctc Ala Glu Ile Ala Glu Glu Ser Ser Pro Glu Val Val Pro Val Glu Leu

ttg tgc gtg c Leu Cys Val P		-			
ttg ggg act g Leu Gly Thr A 1075	2 2	2 222	Pro Glu Gly		_
gag ttg att g Glu Leu Ile A 1090	sp Lys Ser	<del>-</del>			
gct ggc tgg t Ala Gly Trp T 1105		<u>-</u>		Phe Leu Val	
gat gag gtc a Asp Glu Val T		Ile Ala Phe			
gcc ctg gac c Ala Leu Asp L 11	eu Gln His				_
ttt gat gtc a Phe Asp Val T 1155			Ala Val Ala		
ccc cac ttc a Pro His Phe I 1170	le Ser Leu				
gtt gcc cat t Val Ala His P 1185				His Pro Ala	
gtg gag cct t Val Glu Pro P	=	Val Leu Glu	-	_	
ggc atc ctg c Gly Ile Leu L 12	eu Arg Ile				
act tcc aac a Thr Ser Asn T	-				_

1235 1240 1245

-	tac ctt gtc ccc Tyr Leu Val Pro 1255	Ser Asp Ala	•	•	3792
, , , , , , , , , , , , , , , , , , ,	gaa gat cgc ttc Glu Asp Arg Phe 1270	33 3 3	3 3 3	-	3840
	ccc ctg aac ttt Pro Leu Asn Phe 1285	-	Tyr Ile Val		3888
Ala Asn Leu I	aaa gta atg ccc Lys Val Met Prc 300		Lys Leu Ser		3936
	att cag cac tto Ile Gln His Phe				3984
	caa ctt gag att Gln Leu Glu Ile 1335	Thr Glu Lys			4032
	gag gtg aag cca Glu Val Lys Prc 1350	Val Asp Leu			4080
_	ect ttc tca ggt Pro Phe Ser Gly 1365	, ,	, , , , ,	2.2	4128
Gln Leu Gln A	gcc agg atg ggg Ala Arg Met Gly 380	-	Gly Val Leu		4176
	gag gtt ctt act Glu Val Leu Thr			3 3 3 3	4224
	egg cag agc aag Arg Gln Ser Lys 1415	Asn Glu Ala			4272
	gac ctg gcc ctg Asp Leu Ala Leu			, ,	4320

1425 1430 1435 1440

agg gac cct tac ctc gtg tcc tat ctt aga cag cag aat ttg 4362 Arg Asp Pro Tyr Leu Val Ser Tyr Leu Arg Gln Gln Asn Leu 1445 1450

taaaatgagt cagttaggta gtctggaaga gagaatccag cgttctcatt ggaaatggat 4422

aaacagaaat gtgatcattg atttcagtgt tcaagacaga agaagactgg gtaacatcta 4482

tcacacaggc tttcaggaca gacttgtaac ctggcatgta cctattgact gtatcctcat 4542

gcattttcct caag 4556

<210> 10

<211> 1454

<212> PRT

<213> Artificial Sequence

<400> 10

Met Ala Gly Gly Ala Trp Gly Arg Leu Ala Cys Tyr Leu Glu Phe Leu 1 5 10 15

Lys Lys Glu Glu Leu Lys Glu Phe Gln Leu Leu Leu Ala Asn Lys Ala
20 25 30

His Ser Arg Ser Ser Ser Gly Glu Thr Pro Ala Gln Pro Glu Lys Thr 35 40 45

Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gl<br/>n Tyr Gly Glu Gl<br/>n 50  $\phantom{0}$ 55  $\phantom{0}$ 60

Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg
65 70 75 80

Ser Leu Cys Ala Gln Ala Gln Glu Gly Ala Gly His Ser Pro Ser Phe 85 90 95

Pro Tyr Ser Pro Ser Glu Pro His Leu Gly Ser Pro Ser Gln Pro Thr
100 105 110

Ser Thr Ala Val Leu Met Pro Trp Ile His Glu Leu Pro Ala Gly Cys 115 120 125

Thr Gln Gly Ser Glu Arg Arg Val Leu Arg Gln Leu Pro Asp Thr Ser

Gly Arg Arg Trp Arg Glu Ile Ser Ala Ser Leu Leu Tyr Gln Ala Leu Pro Ser Ser Pro Asp His Glu Ser Pro Ser Gln Glu Ser Pro Asn Ala Pro Thr Ser Thr Ala Val Leu Gly Ser Trp Gly Ser Pro Pro Gln Pro Ser Leu Ala Pro Arg Glu Gln Glu Ala Pro Gly Thr Gln Trp Pro Leu Asp Glu Thr Ser Gly Ile Tyr Tyr Thr Glu Ile Arg Glu Arg Glu Arg Glu Lys Ser Glu Lys Gly Arg Pro Pro Trp Ala Ala Val Val Gly Thr Pro Pro Gln Ala His Thr Ser Leu Gln Pro His His Pro Trp Glu Pro Ser Val Arg Glu Ser Leu Cys Ser Thr Trp Pro Trp Lys Asn Glu Asp Phe Asn Gln Lys Phe Thr Gln Leu Leu Leu Gln Arg Pro His Pro Arg Ser Gln Asp Pro Leu Val Lys Arg Ser Trp Pro Asp Tyr Val Glu Glu Asn Arg Gly His Leu Ile Glu Ile Arg Asp Leu Phe Gly Pro Gly Leu Asp Thr Gln Glu Pro Arg Ile Val Ile Leu Gln Gly Ala Ala Gly Ile Gly Lys Ser Thr Leu Ala Arg Gln Val Lys Glu Ala Trp Gly Arg Gly Gln Leu Tyr Gly Asp Arg Phe Gln His Val Phe Tyr Phe Ser Cys Arg Glu Leu Ala Gln Ser Lys Val Val Ser Leu Ala Glu Leu Ile 

Gly Lys Asp Gly Thr Ala Thr Pro Ala Pro Ile Arg Gln Ile Leu Ser

- Arg Pro Glu Arg Leu Leu Phe Ile Leu Asp Gly Val Asp Glu Pro Gly 405 410 415
- Trp Val Leu Gln Glu Pro Ser Ser Glu Leu Cys Leu His Trp Ser Gln 420 425 430
- Pro Gln Pro Ala Asp Ala Leu Leu Gly Ser Leu Leu Gly Lys Thr Ile 435 440 445
- Leu Pro Glu Ala Ser Phe Leu Ile Thr Ala Arg Thr Thr Ala Leu Gln 450 455 460
- Asn Leu Ile Pro Ser Leu Glu Gln Ala Arg Trp Val Glu Val Leu Gly 465 470 475 480
- Phe Ser Glu Ser Ser Arg Lys Glu Tyr Phe Tyr Arg Tyr Phe Thr Asp 485 490 495
- Glu Arg Gln Ala Ile Arg Ala Phe Arg Leu Val Lys Ser Asn Lys Glu 500 505 510
- Leu Trp Ala Leu Cys Leu Val Pro Trp Val Ser Trp Leu Ala Cys Thr 515 520 525
- Cys Leu Met Gln Gln Met Lys Arg Lys Glu Lys Leu Thr Leu Thr Ser 530 540
- Lys Thr Thr Thr Leu Cys Leu His Tyr Leu Ala Gln Ala Leu Gln 545 550 555 560
- Ala Gln Pro Leu Gly Pro Gln Leu Arg Asp Leu Cys Ser Leu Ala Ala 565 570 575
- Glu Gly Ile Trp Gln Lys Lys Thr Leu Phe Ser Pro Asp Asp Leu Arg 580 585 590
- Lys His Gly Leu Asp Gly Ala Ile Ile Ser Thr Phe Leu Lys Met Gly 595 600 605
- Ile Leu Gln Glu His Pro Ile Pro Leu Ser Tyr Ser Phe Ile His Leu 610 615 620
- Cys Phe Gln Glu Phe Phe Ala Ala Met Ser Tyr Val Leu Glu Asp Glu 625 630 635 640
- Lys Gly Arg Gly Lys His Ser Asn Cys Ile Ile Asp Leu Glu Lys Thr

Leu	Glu	Ala	Tyr 660	Gly	Ile	His	Gly	Leu 665	Phe	Gly	Ala	Ser	Thr 670	Thr	Arg
Phe	Leu	Leu 675	Gly	Leu	Leu	Ser	Asp <sup>'</sup>	Glu	Gly	Glu	Arg	Glu 685	Met	Glu	Asn
Ile	Phe 690	His	Cys	Arg	Leu	Ser 695	Gln	Gly	Arg	Asn	Leu 700	Met	Gln	Trp	Val
Pro 705	Ser	Leu	Gln	Leu	Leu 710	Leu	Gln	Pro	His	Ser 715	Leu	Glu	Ser	Leu	His 720
Cys	Leu	Tyr	Glu	Thr 725	Arg	Asn	Lys	Thr	Phe 730	Leu	Thr	Gln	Val	Met 735	Ala
His	Phe	Glu	Glu 740	Met	Gly	Met	Cys	Val 745	Glu	Thr	Asp	Met	Glu 750	Leu	Leu
Val	Cys	Thr 755	Phe	Cys	Ile	Lys	Phe 760	Ser	Arg	His	Val	Lys 765	Lys	Leu	Gln
Leu	Ile 770	Glu	Gly	Arg	Gln	His 775	Arg	Ser	Thr	Trp	Ser 780	Pro	Thr	Met	Val
Val 785	Leu	Phe	Arg	Trp	Val 790	Pro	Val	Thr	Asp	Ala 795	Tyr	Trp	Gln	Ile	Leu 800
Phe	Ser	Val	Leu	Lys 805	Val	Thr	Arg	Asn	Leu 810	Lys	Glu	Leu	Asp	Leu 815	Ser
Gly	Asn	Ser	Leu 820	Ser	His	Ser	Ala	Val 825	Lys	Ser	Leu	Cys	Lys 830	Thr	Leu
Arg	Arg	Pro 835	Arg	Cys	Leu	Leu	Glu 840	Thr	Leu	Arg	Leu	Ala 845	Gly	Cys	Gly
Leu	Thr 850	Ala	Glu	Asp	Cys	Lys 855	Asp	Leu	Ala	Phe	Gly 860	Leu	Arg	Ala	Asn
Gln 865	Thr	Leu	Thr	Glu	Leu 870	Asp	Leu	Ser	Phe	Asn 875	Val	Leu	Thr	Asp	Ala 880
Gly	Ala	Lys	His	Leu 885	Cys	Gln	Arg	Leu	Arg 890	Gln	Pro	Ser	Cys	Lys 895	Leu
												_		_	

Gln Arg Leu Gln Leu Val Ser Cys Gly Leu Thr Ser Asp Cys Cys Gln

Asp Leu Ala Ser Val Leu Ser Ala Ser Pro Ser Leu Lys Glu Leu Asp 920 925 Leu Gln Gln Asn Asn Leu Asp Asp Val Gly Val Arg Leu Leu Cys Glu 

- Gly Leu Arg His Pro Ala Cys Lys Leu Ile Arg Leu Gly Leu Asp Gln
- Thr Thr Leu Ser Asp Glu Met Arg Gln Glu Leu Arg Ala Leu Glu Gln 965 970 975
- Glu Lys Pro Gln Leu Leu Ile Phe Ser Arg Arg Lys Pro Ser Val Met
- Thr Pro Thr Glu Gly Leu Asp Thr Gly Glu Met Ser Asn Ser Thr Ser
- Ser Leu Lys Arg Gln Arg Leu Gly Ser Glu Arg Ala Ala Ser His Val
- Ala Gln Ala Asn Leu Lys Leu Leu Asp Val Ser Lys Ile Phe Pro Ile
- Ala Glu Ile Ala Glu Glu Ser Ser Pro Glu Val Val Pro Val Glu Leu
- Leu Cys Val Pro Ser Pro Ala Ser Gln Gly Asp Leu His Thr Lys Pro
- Leu Gly Thr Asp Asp Phe Leu Gly Pro Glu Gly Asn Val Asp Val
- Glu Leu Ile Asp Lys Ser Thr Asn Arg Tyr Ser Val Trp Phe Pro Thr
- Ala Gly Trp Tyr Leu Trp Ser Ala Thr Gly Leu Gly Phe Leu Val Arg
- Asp Glu Val Thr Val Thr Ile Ala Phe Gly Ser Trp Ser Gln His Leu
- Ala Leu Asp Leu Gln His His Glu Gln Trp Leu Val Gly Gly Pro Leu
- Phe Asp Val Thr Ala Glu Pro Glu Glu Ala Val Ala Glu Ile His Leu

1155	1160	1165

- Pro His Phe Ile Ser Leu Gln Gly Glu Val Asp Val Ser Trp Phe Leu 1170 1175 1180
- Val Ala His Phe Lys Asn Glu Gly Met Val Leu Glu His Pro Ala Arg 1185 1190 1195 1200
- Val Glu Pro Phe Tyr Ala Val Leu Glu Ser Pro Ser Phe Ser Leu Met 1205 1210 1215
- Gly Ile Leu Leu Arg Ile Ala Ser Gly Thr Arg Leu Ser Ile Pro Ile 1220 1225 1230
- Thr Ser Asn Thr Leu Ile Tyr Tyr His Pro His Pro Glu Asp Ile Lys 1235 1240 1245
- Phe His Leu Tyr Leu Val Pro Ser Asp Ala Leu Leu Thr Lys Ala Ile 1250 1255 1260
- Asp Asp Glu Glu Asp Arg Phe His Gly Val Arg Leu Gln Thr Ser Pro 1265 1270 1275 1280
- Pro Met Glu Pro Leu Asn Phe Gly Ser Ser Tyr Ile Val Ser Asn Ser 1285 1290 1295
- Ala Asn Leu Lys Val Met Pro Lys Glu Leu Lys Leu Ser Tyr Arg Ser 1300 1305 1310
- Pro Gly Glu Ile Gln His Phe Ser Lys Phe Tyr Ala Gly Gln Met Lys 1315 1320 1325
- Glu Pro Ile Gln Leu Glu Ile Thr Glu Lys Arg His Gly Thr Leu Val 1330 1335 1340
- Trp Asp Thr Glu Val Lys Pro Val Asp Leu Gln Leu Val Ala Ala Ser 1345 1350 1355 1360
- Ala Pro Pro Pro Phe Ser Gly Ala Ala Phe Val Lys Glu Asn His Arg 1365 1370 1375
- Gln Leu Gln Ala Arg Met Gly Asp Leu Lys Gly Val Leu Asp Asp Leu 1380 1385 1390
- Gln Asp Asn Glu Val Leu Thr Glu Asn Glu Lys Glu Leu Val Glu Gln 1395 1400 1405
- Glu Lys Thr Arg Gln Ser Lys Asn Glu Ala Leu Leu Ser Met Val Glu

1410 1415 1420

Lys Lys Gly Asp Leu Ala Leu Asp Val Leu Phe Arg Ser Ile Ser Glu 1425 1430 1435 1440

Arg Asp Pro Tyr Leu Val Ser Tyr Leu Arg Gln Gln Asn Leu 1445 1450

<210> 11

<211> 4466

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<222> (1)..(4272)

<220>

<223> Description of Artificial Sequence: Synthetic Construct

<400> 11

atg gct ggc gga gcc tgg ggc cgc ctg gcc tgt tac ttg gag ttc ctg 48

Met Ala Gly Gly Ala Trp Gly Arg Leu Ala Cys Tyr Leu Glu Phe Leu

1 10 15

aag aag gag ctg aag gag ttc cag ctt ctg ctc gcc aat aaa gcg 96 Lys Lys Glu Glu Leu Lys Glu Phe Gln Leu Leu Ala Asn Lys Ala 20 25 30

cac tcc agg agc tct tcg ggt gag aca ccc gct cag cca gag aag acg  $\,$  144 His Ser Arg Ser Ser Ser Gly Glu Thr Pro Ala Gln Pro Glu Lys Thr  $\,$  35  $\,$  40  $\,$  45

agt ggc atg gag gtg gcc tcg tac ctg gtg gct cag tat ggg gag cag 192 Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gln Tyr Gly Glu Gln 50 55 60

cgg gcc tgg gac cta gcc ctc cat acc tgg gag cag atg ggg ctg agg 240 Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg 65 70 75 80

tca ctg tgc gcc caa gcc cag gaa ggg gca ggc cac tct ccc tca ttc 288 Ser Leu Cys Ala Gln Ala Gln Glu Gly Ala Gly His Ser Pro Ser Phe 85 90 95

				agt Ser										336
		_		cta Leu	_									384
				gag Glu										432
	_			aga Arg	_		_	_				-		480
				gac Asp 165										528
				gca Ala		_		_						576
_		_		aga Arg		_		-					-	624
_	_	_		gga Gly										672
				aaa Lys					 _	 	_		-	720
		-		cac His 245		-		_						768
		, ,	-	gag Glu	-		_		, ,					816
-				aaa Lys			_	_			_			864

	_	_		_	ccc Pro	-	-	_	-	_			_			912
			_		cat His 310					_	-					960
	_	_			gaa Glu		-		-		_	-		_	_	1008
			_		aca Thr	-	-		-		_	_				1056
_		_	_		Gly	_			_		_				-	1104
_	_		_	_	cag Gln		_			-		-				1152
					gcc Ala 390											1200
					ctc Leu				_		-	-				1248
	-	_	_		ccg Pro	_				-	_			_	_	1296
					gca Ala											1344
			_		ttc Phe	_				-						1392
					ttg Leu 470											1440

				-		_	-	tat Tyr			_				-	1488
_			-		-	-		agg Arg 505	_	_						1536
								tgg Trp								1584
_	-	-	_	_	_	_		aag Lys	-				_			1632
_						_		cat His			-	_	_			1680
-	_		_			_		aga Arg	-		_		-	-	-	1728
						_		ctt Leu 585		_		-	-			1776
_				-		_		atc Ile				_	_	_		1824
								ctg Leu	_		_					1872
_						_	_	atg Met			_	_		_		1920
_		-						tgc Cys			-	_	-	_	_	1968
								ctg Leu 665								2016

		_		_	tta Leu	_										2064
					ctg Leu											2112
_		_	-	_	ctg Leu 710	_	_									2160
_	_				cgg Arg			-		-					-	2208
					ggc Gly											2256
, ,	_			_	att Ile				_		, ,	_	_		-	2304
					cag Gln		-				-			_	-	2352
_	_				gtc Val 790		-		-	-			-			2400
		-		_	gtc Val		-		_	_		_	_		-	2448
		-	-	-	cac His		-		-	_		_	_		_	2496
	_		-	-	ctc Leu	-										2544
					tgc Cys											2592

					ctg Leu 870	-	_	_					_	-	_	2640
	-				tgc Cys											2688
_	_	_	_	_	gtc Val	-	_			_		_	_	-	_	2736
_	_	_			ctt Leu	-	_	-			_	_			-	2784
					ctg Leu											2832
					gcc Ala 950											2880
	_				gag Glu		-	_	-			_	_		-	2928
				_	cgg Arg	_	-							-		2976
	-	-	-	-	aat Asn	Leu			-	_	Val	_	_			3024
Pro		_			gca Ala 1		-	_		Pro		-	-			3072
	Leu	_	_	Val	cct Pro 1030				Ser					His		3120
			Gly		gac Asp			Phe					Gly			3168

gat gtt gag ttg Asp Val Glu Leu 1060	-	-		l Trp Phe
ccc act gct ggc Pro Thr Ala Gly 1075	Trp Tyr Leu			
gta agg gat gag Val Arg Asp Glu 1090				
cac ctg gcc ctg His Leu Ala Leu 1105		His His Glu		
ccc ttg ttt gat Pro Leu Phe Asp			· · · · · · · · · · · · · · · · · · ·	
cac ctc ccc cac His Leu Pro His 1140		3,3	, , , , ,	Ser Trp
ttt ctc gtt gcc Phe Leu Val Ala 1155	His Phe Lys			
gcc cgg gtg gag Ala Arg Val Glu 1170		, ,	, ,	
ctg atg ggc atc Leu Met Gly Ile 1185		Ile Ala Ser		
ccc atc act tcc Pro Ile Thr Ser	_			-
att aag ttc cac Ile Lys Phe His 1220	_	_		Thr Lys
gcg ata gat gat Ala Ile Asp Asp 1235	Glu Glu Asp	_		_

	-		ec agt tat att gtg er Ser Tyr Ile Val 1260	
-	-		ag ttg aaa ttg tcc lu Leu Lys Leu Ser 75 1	
Arg Ser Pro Gly	-		aa ttc tat gct ggg ys Phe Tyr Ala Gly 1295	_
			aa aaa aga cat ggg .u Lys Arg His Gly 1310	_
2 2 2 2 2	Thr Glu Val	3 3 3 3	at ctc cag ctt gta sp Leu Gln Leu Val . 1325	-
-		22 2 2	cc ttt gtg aag gag a Phe Val Lys Glu . 1340	
	2 23		g aaa ggg gtg ctc u Lys Gly Val Leu . 5	-
Asp Leu Gln Asp			at gag aag gag ctg sn Glu Lys Glu Leu 1375	
			ng gcc ttg ctg agc o nu Ala Leu Leu Ser I 1390	-
	Gly Asp Leu		g ctc ttc aga agc a l Leu Phe Arg Ser 1 1405	
			t aga cag cag aat s u Arg Gln Gln Asn 1 1420	-
taaaatgagt cagtt	aggta gtctgg	aaga gagaatcca	g cgttctcatt ggaaa	tggat 4332
aaacagaaat gtgat	cattg atttca	gtgt tcaagacag	a agaagactgg gtaaca	atcta 4392

tcacacagge tttcaggaca gacttgtaac ctggcatgta cctattgact gtatcctcat 4452 gcattttcct caag 4466

<210	0> 1:	2													
<21	1> 1	424													
<212	2> P	RT													
<213	3> A:	rtif.	icia	l Se	quen	ce									
<223	3> De	escr	ipti	on o	f Art	tifi	cial	Seq	uenc	e: S	ynth	etic			
	C	onst:	ruct												
<400	)> 12	2													
Met	Aĺa	Gly	Gly	Ala	Trp	Gly	Arg	Leu	Ala	Cys	Tyr	Leu	Glu	Phe	Leu
1				5					10					15	
Lys	Lys	Glu	Glu	Leu	Lys	Glu	Phe	Gln	Leu	Leu	Leu	Ala	Asn	Lys	Ala
			20					25					30		
His	Ser	Arg	Ser	Ser	Ser	Gly	Glu	Thr	Pro	Ala	Gln	Pro	Glu	Lys	Thr
		35					40					45			
Ser	_	Met	Glu	Val	Ala		Tyr	Leu	Val	Ala		Tyr	Gly	Glu	Glr
	50					55					60				
7 ~ ~	חות	Т хх	7 00	T 011	חות	T 0.11	uia	mb~	Ф~~	C1.,	Cln	Mot	C1	Tou	7. ~ ~
65	Ата	тър	Asp	Leu	70	Leu	птр	1111	тър	75	GIII	met	Gly	ьеи	80
0.5					70					73					00
Ser	Len	Cvs	Ala	Gln	Ala	Gln	Glu	Glv	Δla	Glv	His	Ser	Pro	Ser	Phe
	200	0,0	1124	85		01	010		90	0+1	1120	201	110	95	
Pro	Tyr	Ser	Pro	Ser	Glu	Pro	His	Leu	Gly	Ser	Pro	Ser	Gln	Pro	Thr
	-		100					105	_				110		
Ser	Thr	Ala	Val	Leu	Met	Pro	Trp	Ile	His	Glu	Leu	Pro	Ala	Gly	Cys
		115					120					125			
Thr	Gln	Gly	Ser	Glu	Arg	Arg	Val	Leu	Arg	Gln	Leu	Pro	Asp	Thr	Ser
	130					135					140				
Gly	Arg	Arg	Trp	Arg	Glu	Ile	Ser	Ala	Ser	Leu	Leu	Tyr	Gln	Ala	Leu
145					150					155					160

Pro Ser Ser Pro Asp His Glu Ser Pro Ser Gln Glu Ser Pro Asn Ala

Pro Thr Ser Thr Ala Val Leu Gly Ser Trp Gly Ser Pro Pro Gln Pro

Ser	Leu	Ala 195	Pro	Arg	Glu	Gln	Glu 200	Ala	Pro	Gly	Thr	Gln 205	Trp	Pro	Leu
Asp	Glu 210	Thr	Ser	Gly	Ile	Tyr 215	Tyr	Thr	Glu	Ile	Arg 220	Glu	Arg	Glu	Arg
Glu 225	Lys	Ser	Glu	Lys	Gly 230	Arg	Pro	Pro	Trp	Ala 235	Ala	Val	Val	Gly	Thr 240
Pro	Pro	Gln	Ala	His 245	Thr	Ser	Leu	Gln	Pro 250	His	His	His	Pro	Trp 255	Glu
Pro	Ser	`Val	Arg 260	Glu	Ser	Leu	Čys	Ser 265	Thr	Trp	Pro	Trp	Lys 270	Asn	Glu
Asp	Phe	Asn 275	Gln	Lys	Phe	Thr	Gln 280	Leu	Leu	Leu	Leu	Gln 285	Arg	Pro	His
Pro	Arg 290	Ser	Gln	Asp	Pro	Leu 295	Val	Lys	Arg	Ser	Trp 300	Pro	Asp	Tyr	Val
Glu 305	Glu	Asn	Arg	Gly	His 310	Leu	Ile	Glu	Ile	Arg 315	Asp	Leu	Phe	Gly	Pro 320
Gly	Leu	Asp	Thr	Gln 325	Glu	Pro	Arg	Ile	Val 330	Ile	Leu	Gln	Gly	Ala 335	Ala
Gly	Ile	Gly	Lys 340	Ser	Thr	Leu	Ala	Arg 345	Gln	Val	Lys	Glu	Ala 350	Trp	Gly
Arg	Gly	Gln 355	Leu	Tyr	Gly	Asp	Arg 360	Phe	Gln	His	Val	Phe 365	Tyr	Phe	Ser
Cys	Arg 370	Glu	Leu	Ala	Gln	Ser 375	Lys	Val	Val	Ser	Leu 380	Ala	Glu	Leu	Ile
Gly 385	Lys	Asp	Gly	Thr	Ala 390	Thr	Pro	Ala	Pro	Ile 395	Arg	Gln	Ile	Leu	Ser 400
Arg	Pro	Glu	Arg	Leu 405	Leu	Phe	Ile	Leu	Asp 410	Gly	Val	Asp	Glu	Pro 415	Gly
Trp	Val	Leu	Gln 420	Glu	Pro	Ser	Ser	Glu 425	Leu	Cys	Leu	His	Trp 430	Ser	Gln
Pro	Gln	Pro 435	Ala	Asp	Ala	Leu	Leu 440	Gly	Ser	Leu	Leu	Gly 445	Lys	Thr	Ile

Leu	Pro 450	Glu	Ala	Ser	Phe	Leu 455	Ile	Thr	Ala	Arg	Thr 460	Thr	Ala	Leu	Gln
Asn 465	Leu	Ile	Pro	Ser	Leu 470	Glu	Gln	Ala	Arg	Trp 475	Val	Glu	Val	Leu	Gly 480
Phe	Ser	Glu	Ser	Ser 485	Arg	Lys	Glu	Tyr	Phe 490	Tyr	Arg	Tyr	Phe	Thr 495	Asp
Glu	Arg	Gln	Ala 500	Ile	Arg	Ala	Phe	Arg 505	Leu	Val	Lys	Ser	Asn 510	Lys	Glu
Leu	Trp	Ala 515	Leu	Cys	Leu	Val	Pro <sup>*</sup> 520	Trp	Val	Ser	Trp	Leu 525	Äla	Cys	Thr
Cys	Leu 530	Met	Gln	Gln	Met	Lys 535	Arg	Lys	Glu	Lys	Leu 540	Thr	Leu	Thr	Ser
Lys 545	Thr	Thr	Thr	Thr	Leu 550	Cys	Leu	His	Tyr	Leu 555	Ala	Gln	Ala	Leu	Gln 560
Ala	Gln	Pro	Leu	Gly 565	Pro	Gln	Leu	Arg	Asp 570	Leu	Cys	Ser	Leu	Ala 575	Ala
Glu	Gly	Ile	Trp 580	Gln	Lys	Lys	Thr	Leu 585	Phe	Ser	Pro	Asp	Asp 590	Leu	Arg
Lys	His	Gly 595	Leu	Asp	Gly	Ala	Ile 600	Ile	Ser	Thr	Phe	Leu 605	Lys	Met	Gly
Ile	Leu 610	Gln	Glu	His	Pro	Ile 615	Pro	Leu	Ser	Tyr	Ser 620	Phe	Ile	His	Leu
Cys 625	Phe	Gln	Glu	Phe	Phe 630	Ala	Ala	Met	Ser	Tyr 635	Val	Leu	Glu	Asp	Glu 640
Lys	Gly	Arg	Gly	Lys 645	His	Ser	Asn	Cys	Ile 650	Ile	Asp	Leu	Glu	Lys 655	Thr
Leu	Glu	Ala	Tyr 660	Gly	Ile	His	Gly	Leu 665	Phe	Gly	Ala	Ser	Thr 670	Thr	Arg
Phe	Leu	Leu 675	Gly	Leu	Leu	Ser	Asp 680	Glu	Gly	Glu	Arg	Glu 685	Met	Glu	Asn
Ile	Phe 690	His	Cys	Arg	Leu	Ser 695	Gln	Gly	Arg	Asn	Leu 700	Met	Gln	Trp	Val

Pro 705	Ser	Leu	Gln	Leu	Leu 710	Leu	Gln	Pro	His	Ser 715	Leu	Glu	Ser	Leu	His 720
Cys	Leu	Tyr	Glu	Thr 725	Arg	Asn	Lys	Thr	Phe 730	Leu	Thr	Gln	Val	Met 735	Ala
His	Phe	Glu	Glu 740	Met	Gly	Met	Cys	Val 745	Glu	Thr	Asp	Met	Glu 750	Leu	Leu
Val	Cys	Thr 755	Phe	Cys	Ile	Lys	Phe 760	Ser	Arg	His	Val	Lys 765	Lys	Leu	Gln
Leu	Ile 770	Glu	Gly	Arg	Gln	His 775	Arg	Ser	Thr	Trp	Ser 780	Pro	Thr	Met	Val
Val 785	Leu	Phe	Arg	Trp	Val 790	Pro	Val	Thr	Asp	Ala 795	Tyr	Trp	Gln	Ile	Leu 800
Phe	Ser	Val	Leu	Lys 805	Val	Thr	Arg	Asn	Leu 810	Lys	Glu	Leu	Asp	Leu 815	Ser
Gly	Asn	Ser	Leu 820	Ser	His	Ser	Ala	Val 825	Lys	Ser	Leu	Cys	Lys 830	Thr	Leu
Arg	Arg	Pro 835	Arg	Cys	Leu	Leu	Glu 840	Thr	Leu	Arg	Leu	Ala 845	Gly	Cys	Gly
Leu	Thr 850	Ala	Glu	Asp	Cys	Lys 855	Asp	Leu	Ala	Phe	Gly 860	Leu	Arg	Ala	Asn
Gln 865	Thr	Leu	Thr	Glu	Leu 870	Asp	Leu	Ser	Phe	Asn 875	Val	Leu	Thr	Asp	Ala 880
Gly	Ala	Lys	His	Leu 885	Cys	Gln	Arg	Leu	Arg 890	Gln	Pro	Ser	Суз	Lys 895	Leu
Gln	Arg	Leu	Gln 900	Leu	Val	Ser	Cys	Gly 905	Leu	Thr	Ser	Asp	Cys 910	Cys	Gl'n
Asp	Leu	Ala 915	Ser	Val	Leu	Ser	Ala 920	Ser	Pro	Ser	Leu	Lys 925	Glu	Leu	Asp
Leu	Gln 930	Gln	Asn	Asn	Leu	Asp 935	Asp	Val	Gly	Val	Arg 940	Leu	Leu	Cys	Glu
Gly 945	Leu	Arg	His	Pro	Ala 950	Cys	Lys	Leu	Ile	Arg 955	Leu	Gly	Lys	Pro	Ser 960

- Val Met Thr Pro Thr Glu Gly Leu Asp Thr Gly Glu Met Ser Asn Ser 965 970 975
- Thr Ser Ser Leu Lys Arg Gln Arg Leu Gly Ser Glu Arg Ala Ala Ser 980 985 990
- His Val Ala Gln Ala Asn Leu Lys Leu Leu Asp Val Ser Lys Ile Phe 995 1000 1005
- Pro Ile Ala Glu Ile Ala Glu Glu Ser Ser Pro Glu Val Val Pro Val 1010 1015 1020
- Glu Leu Leu Cys Val Pro Ser Pro Ala Ser Gln Gly Asp Leu His Thr 1025 1030 1035 1040
- Lys Pro Leu Gly Thr Asp Asp Phe Leu Gly Pro Glu Gly Asn Val 1045 1050 1055
- Asp Val Glu Leu Ile Asp Lys Ser Thr Asn Arg Tyr Ser Val Trp Phe 1060 1065 1070
- Pro Thr Ala Gly Trp Tyr Leu Trp Ser Ala Thr Gly Leu Gly Phe Leu 1075 1080 1085
- Val Arg Asp Glu Val Thr Val Thr Ile Ala Phe Gly Ser Trp Ser Gln 1090 1095 1100
- His Leu Ala Leu Asp Leu Gln His His Glu Gln Trp Leu Val Gly Gly 1105 1110 1115 1120
- Pro Leu Phe Asp Val Thr Ala Glu Pro Glu Glu Ala Val Ala Glu Ile 1125 1130 1135
- His Leu Pro His Phe Ile Ser Leu Gl<br/>n Gly Glu Val Asp Val Ser Tr<br/>p 1140 1145 1150
- Phe Leu Val Ala His Phe Lys Asn Glu Gly Met Val Leu Glu His Pro 1155 1160 1165
- Ala Arg Val Glu Pro Phe Tyr Ala Val Leu Glu Ser Pro Ser Phe Ser 1170 1175 1180
- Leu Met Gly Ile Leu Leu Arg Ile Ala Ser Gly Thr Arg Leu Ser Ile 1185 1190 1195 1200
- Pro Ile Thr Ser Asn Thr Leu Ile Tyr Tyr His Pro His Pro Glu Asp 1205 1210 1215

Ile Lys Phe His Leu Tyr Leu Val Pro Ser Asp Ala Leu Leu Thr Lys 1220 1225 1230

Ala Ile Asp Asp Glu Glu Asp Arg Phe His Gly Val Arg Leu Gln Thr 1235 1240 1245

Ser Pro Pro Met Glu Pro Leu Asn Phe Gly Ser Ser Tyr Ile Val Ser 1250 1255 1260

Asn Ser Ala Asn Leu Lys Val Met Pro Lys Glu Leu Lys Leu Ser Tyr 1265 1270 1275 1280

Arg Ser Pro Gly Glu Ile Gln His Phe Ser Lys Phe Tyr Ala Gly Gln
1285 1290 1295

Met Lys Glu Pro Ile Gln Leu Glu Ile Thr Glu Lys Arg His Gly Thr 1300 1305 1310

Leu Val Trp Asp Thr Glu Val Lys Pro Val Asp Leu Gln Leu Val Ala 1315 1320 1325

Ala Ser Ala Pro Pro Pro Phe Ser Gly Ala Ala Phe Val Lys Glu Asn 1330 1335 1340

His Arg Gln Leu Gln Ala Arg Met Gly Asp Leu Lys Gly Val Leu Asp 1345 1350 1355 1360

Asp Leu Gln Asp Asn Glu Val Leu Thr Glu Asn Glu Lys Glu Leu Val 1365 1370 1375

Glu Gl<br/>n Glu Lys Thr Arg Gl<br/>n Ser Lys Asn Glu Ala Leu Leu Ser Met 1380 1385 1390

Val Glu Lys Lys Gly Asp Leu Ala Leu Asp Val Leu Phe Arg Ser Ile 1395 1400 1405

Ser Glu Arg Asp Pro Tyr Leu Val Ser Tyr Leu Arg Gln Gln Asn Leu 1410 1415 1420

<210> 13

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence. Filmer	
<400> 13	
ccgaattcac catggctggc ggagcctggg gc	32
<210> 14	
<211> 34	
<212> DNA	
<213> Artificial Sequence	
<220>	
<pre>&lt;223&gt; Description of Artificial Sequence: Primer .</pre>	
<400> 14	
ccgctcgagt caacagaggg ttgtggtggt cttg	34
<210> 15	
<211> 31 <212> DNA	
<213> Artificial Sequence	
Less interretar boquence	
<220>	
<223> Description of Artificial Sequence: Primer	
<400> 15	31
cccgaattcg aacctcgcat agtcatactg c	31
<210> 16	
<211> 30	
<212> DNA	
<213> Artificial Sequence	
<220>	
<pre>&lt;223&gt; Description of Artificial Sequence: Primer</pre>	
•	
<400> 16	
gtcccacaac agaattcaat ctcaacggtc	30
<210> 17	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 17	

tgtgatgaga gaagcggtga c	21
<210> 18 <211> 30	
<212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence: Primer	
<400> 18 ccgctcgagc aaagaagggt cagccaaagc	30